

حمل الآن

مجاناً وحصرياً

المراجعة رقم (1)

اختبار شهر اكتوبر



Model Exam on Concept (1.1)

Total mark
15

1 (A) Complete the following sentences using the words below :

(5 marks)

(blood vessels – expands – cool – mild)

1. A burrow is an excellent place for the fennec fox to stay during the day.
2. During exhalation, the diaphragm and moves upward.
3. Savannah is a grassland habitat with a temperature.
4. The in the gills of fish carry oxygen gas to the rest of the body.

(B) Give a reason for the following :

Starred agama lizard and golden frog are two different species.

.....
.....

2 (A) Put (S) in front of structural adaptation and (B) in front of behavioral adaptation for each of the following statements :

(5 marks)

1. Bull shark can hunt in salt water and fresh water. (.....)
2. Black bear has dark fur. (.....)
3. Acacia tree uses wind to send messages. (.....)
4. Blood vessels in the penguin's feet. (.....)

(B) What happens if ... ?

Amphibians don't have lungs and breathe only through skin.

.....

3 (A) Choose from column (B) what suits it in column (A) :

(5 marks)

(A) Living organism	(B) Habitat
1. Lizard.	a. Land and water.
2. Fish.	b. Desert.
3. Frog.	c. Water.
4. Polar bear.	d. Arctic region.

1. 2. 3. 4.

(B) Write the scientific term of each of the following :

1. Little air sacs surrounded by blood vessels in the respiratory system. (.....)
2. A fox that changes its fur color between winter and summer seasons. (.....)

Model Exam on Concepts (1.1) & (1.2)

Total mark

15

1 (A) Put (✓) or (X) :

(5 marks)

1. Hand-shaped leaves of kapok tree is considered as a structural adaptation. ()
2. Humpback whales produce high-pitched sound in summer. ()
3. Amphibians include frogs, starred agama and salamanders. ()
4. The brain can process what we hear from our environment. ()

(B) Cross out the odd word :

1. Nerves – Small intestine – Brain – Spinal cord. (.....)
2. Stomach – Diaphragm – Esophagus – Large intestine. (.....)

2 (A) Choose from columns (B) and (C) what suit them in column (A) :

(5 marks)

(A) Living organism	(B) Species	(C) Habitat
1. Bull shark.	a. Reptile.	A. Savannah.
2. Starred agama.	b. Amphibian.	B. Salt and fresh water.
3. Acacia.	c. Fish.	C. Wet environment.
4. Frog.	d. Plant.	D. Desert environment.

1. → 2. → 3. → 4. →

(B) Give a reason for the following :

The nurse ants send smelly messages to scout ants.

.....
.....

3 (A) Complete the following sentences using the words below :

(5 marks)

(penguin – reflex – reaction time – oxygen gas)

1. Moving your hand away when touching a very hot cup of tea is called
2. Living organisms need food and to obtain energy.
3. Among animals that can live in polar environment are and polar bear.
4. The time taken by a boy to move quickly his hand away, when he touches the spines of a cactus plant is called

(B) Correct the underlined words :

1. Fish use lungs to take oxygen out of the water. (.....)
2. The scout ants use smelly message to communicate if there is danger nearby. (.....)

October Tests

Total mark

15

Model 1

1 (A) Choose the correct answer :

(5 marks)

- Fish use to extract oxygen gas from water.
a. lungs b. gills c. skin d. stomach
- The organ that is responsible for the sense of touch is
a. the ear. b. the tongue. c. the skin. d. the eye.
- Which of the following can turn its head in all directions ?
a. Lizard. b. Owl. c. Arctic fox. d. Panther chameleon.
- The passage of food in your body from mouth to blood vessels is
a. esophagus → stomach → small intestine.
b. stomach → large intestine → anus.
c. small intestine → stomach → esophagus.
d. stomach → small intestine → large intestine.

(B) Give a reason for the following :

Panting of fennec fox is considered as a behavioral adaptation.

.....

2 (A) Put (✓) or (X) :

(5 marks)

- Diaphragm has an important role during digestion process. ()
- Jerboa has large ears and short hind legs. ()
- The ears of arctic fox are longer than those of fennec fox. ()
- Mangrove trees grow in salt water. ()

(B) Compare between sounds of humpback whales in different seasons :

P.O.C	In summer	In winter
Produced sound :		

3 (A) Write the scientific term of each of the following :

(5 marks)

1. The organ which is considered as the main control center in the body.
(.....)
2. The tube-shaped organ which connect the throat with the two lungs.
(.....)
3. A tree lives in snow habitat which has a triangular shape and needle leaves.
(.....)
4. A strategy of bull shark which makes its back darker than its belly to sneak up on prey.
(.....)

(B) Mention the function of teeth.

.....

Model 2

Total mark

15

1 (A) Complete the following sentences :

(5 marks)

1. The diaphragm rises up during the process, while it contracts during the process.
2. Dolphins have sharp sense of, which they depend on to locate living organisms and objects under water through property.
3. The absorption of nutrients in your body takes place in, while absorption of water from the undigested food takes place in
4. Toads breathe under water through their, while they breathe on land by using their

(B) What happens if ...?

Your brain receives a message from one of sensory organs through nerves.

.....

2 (A) Correct the underlined words :

(5 marks)

1. Kapok tree has taproot which hold the tree firmly in the soggy soil.
(.....)

2. Reflex is the time taken by the body to respond and react with surrounding environment. (.....)
3. Arctic fox has white fur in summer. (.....)
4. The spinal cord passes through mouth. (.....)

(B) Give a reason for the following :

A panther chameleon puffs up its body with air.

.....

3 (A) Give only one example for the following :

(5 marks)

1. Behavioral adaptation of fennec fox.

2. Structural adaptation of jerboa.

3. Desert plant that has sharp spines.

4. Nocturnal animal has sharp sight sense.

(B) Cross out the odd word :

Acacia tree – Ant – Bat – Kapok tree.

(.....)

Model 3

Total mark

15

1 (A) Put (✓) or (X) :

(5 marks)

1. Camouflage helps animals hunting their prey. ()
2. Exhaled air contains more oxygen gas. ()
3. Dolphins have a stronger sense of hearing than human. ()
4. The scientific idea of a blind person's cane is echolocation. ()

(B) Mention the function of :

The spinal cord in the human body.

.....

2 (A) Complete the following sentences :**(5 marks)**

1. Amphibians breathe through their and
2. During exhalation, gas is released, while during inhalation gas enters to the lungs.
3. The nervous system consists of, and nerves.
4. Tan-colored coat in fennec fox is considered adaptation, while its panting to stay cool is considered adaptation.

(B) Define :

Digestion process

3 (A) Correct the underlined words :**(5 marks)**

1. Gills are unique behavioral adaptation that allow fish to breathe under water. (.....)
2. Starred agama is a reptile, while frog is a lizard. (.....)
3. The spinal cord passes through the mouth. (.....)
4. Scout ants are responsible for alarming the colony in danger. (.....)

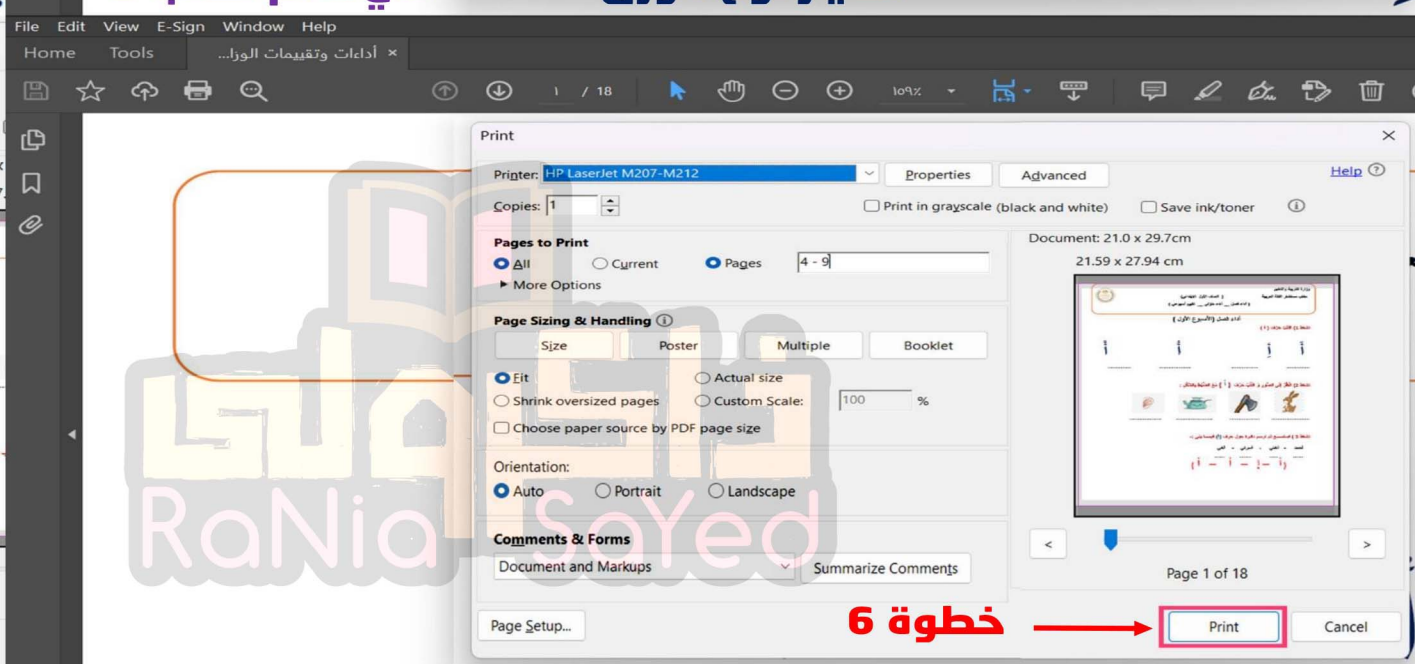
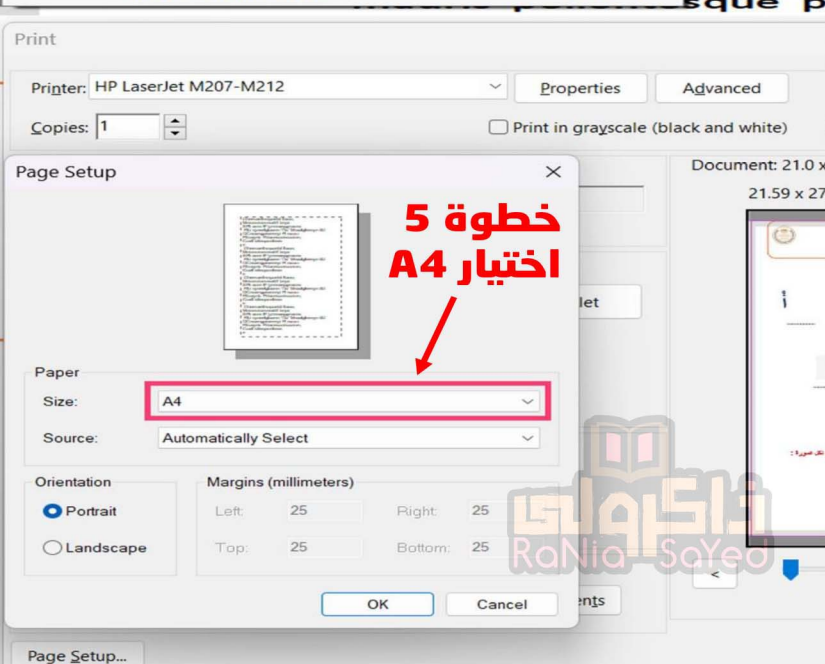
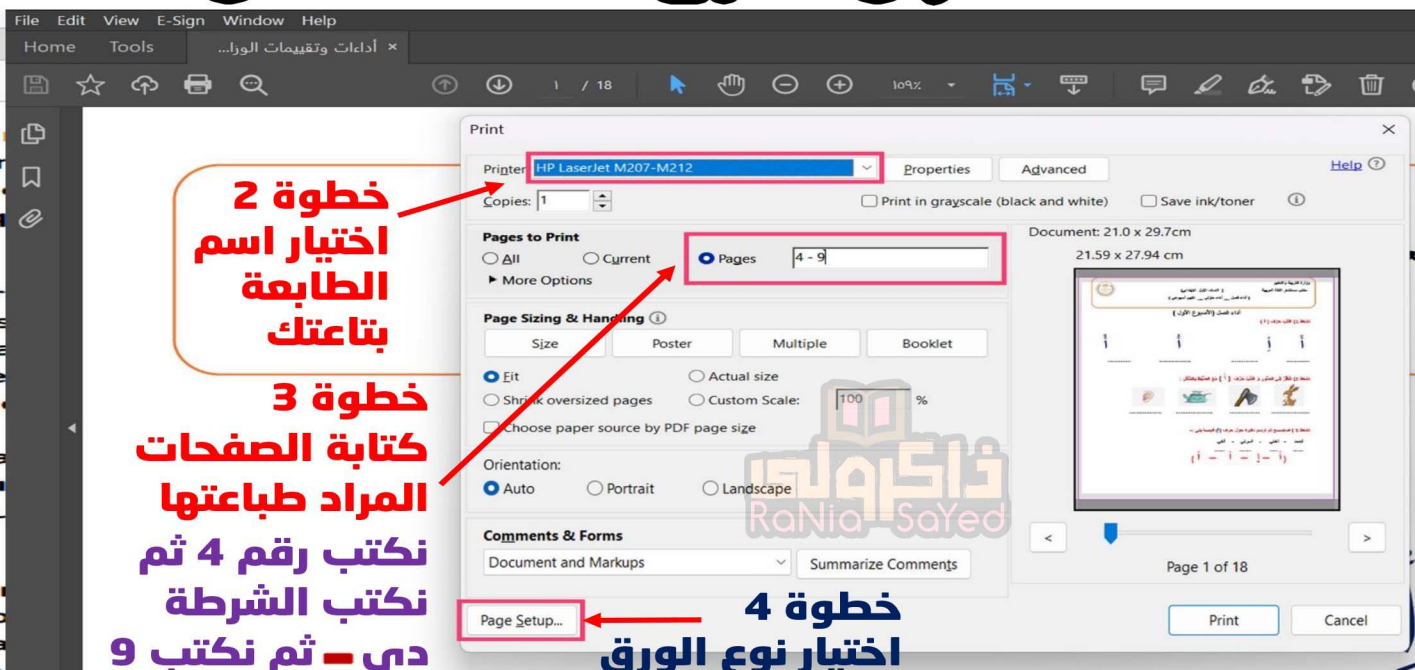
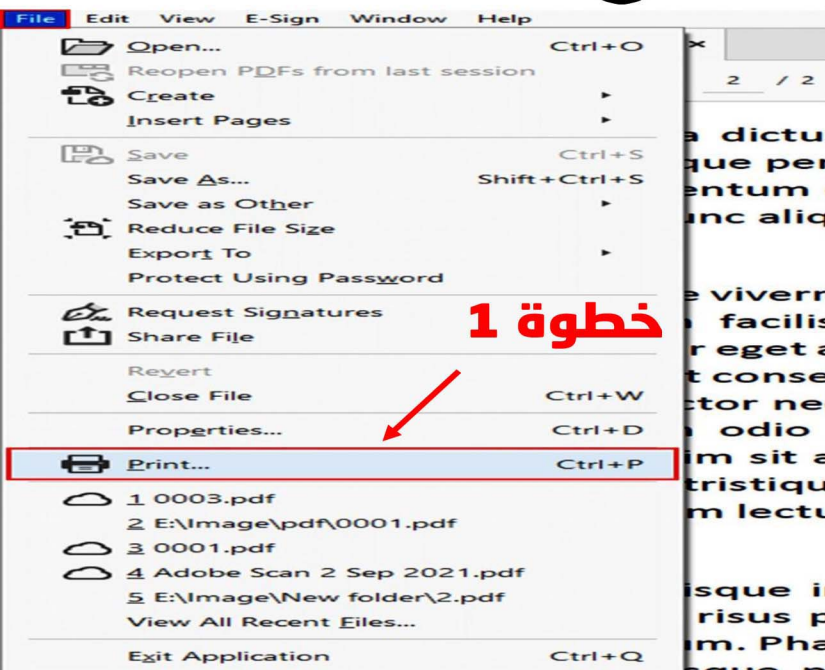
(B) Give a reason for the following :

Owl is a nocturnal animal.

.....

كيفية طباعة صفحات معينة من ملف معين

مثلا ازاي نطبع الصفحات من صفحة 4 الى صفحة 9



حمل الآن

مجاناً وحصرياً

المراجعة رقم (2)

اختبار شهر اكتوبر



Revision on Concept 1.1

Adaptation and Survival

1 Definitions

Adaptation	They are the characteristics that help living organisms survive and reproduce in their ecosystem.
Ecosystem	It is an area in which living organisms and nonliving things interact with each other.
Habitat	It is the environment where a living organism lives.
Structural adaptation	It is a change in a living organism's body structure to help it survive.
Behavioral adaptation	It is a change in a living organism's behavior or acts to help it survive.
Camouflage	It is a type of adaptation in which an animal blends in with the surrounding environment to hide from predators or sneak up on prey.
Countershading	It is a camouflage strategy in which the bull shark has a dark back and a white belly.
Predator	It is an animal that hunts (eats) another animal.
Prey	It is an animal that is hunted (eaten) by another animal.
Penguin	It is a non-flying bird that has a thick fat layer and dense feathers on its body.
Camel	It is an animal that stores fat in its hump to adapt to the desert environment.
Caracal	It is a cat with tan-colored fur that lives in the desert.
Polar bear	It is a bear that has white, thick fur and lives in Arctic region.
Black (brown) bear	It is a bear that has dark fur and lives in forests.

Fennec fox	It is a fox that has sandy-colored fur and lives in deserts.
Arctic fox	It is a fox that has white fur in winter and brown fur in summer.
Bull shark	It is an organism that uses a countershading strategy to hunt.
Agama lizard	It is a lizard with colorful scales that adapted to live in the desert.
Panther chameleon	It is a lizard that can change the color of its scales and adapted to live in tropical rainforests.
Amazon rainforest	It is a rainforest that is characterized by its strong wind and soggy soil.
Savannah	It is a grassland habitat that has drought conditions.
Kapok tree	It is an umbrella-shaped tree that grows in Amazon rainforests.
Acacia tree	It is an umbrella-shaped tree that grows in savannah grasslands.
Taproots	They are very long roots that grow directly downward in acacia trees.
Buttress roots	They are wide and large roots that fix the kapok tree firmly to the soggy soil.
Pine tree	It is a tree that adapted to survive in snow and has a triangular shape.
Water lily	It is a tree that has wide leaves floating on water to absorb sunlight.
Mangrove tree	It is a tree that grows in salt water and has a strong, long root to resist water waves.
System	It is a group of organs that work together to perform a job (function).
Digestion	It is the process of breaking down food into smaller pieces to provide the body with nutrients.

Digestive system	It is the system that breaks down food into tiny pieces so the body cells can use them for energy.
Respiratory system	It is the system responsible for breathing (respiration).
Respiration	It is the process of pulling the air in the body and pushing the air out of the body.
Inhalation	It is the process of pulling the air in the body.
Exhalation	It is the process of pushing the air out of the body.
Oxygen	It is the gas needed for respiration for all living organisms.
Carbon dioxide	It is the gas expelled out of the body during respiration.
Air pollution	It is a type of pollution that makes it hard for human to breathe.
Water pollution	It is a type of pollution that makes it hard for human to find clean drinking water.
Soil pollution	It is a type of pollution that makes the crops can't grow.
Amphibians	They are living organisms that can live on land or in water.
Endangered species	They are the species that a great loss in the number of their members.
Extinction	It is the continuous decrease in the number of individuals of an organism until the death of all its members.

2 Importance

Mouth	It is the organ where the digestion of food starts.
Teeth	They crush (break) the food during chewing.
Tongue	It mixes the crushed food with saliva.
Saliva	It is a liquid substance in the mouth that moistens food.

Pharynx	- It is a common passage for both food and air. - It is an organ that pushes food into the esophagus. - It is an organ that pushes air into the trachea.
Esophagus	It is a long, muscular tube that moves food to the stomach.
Stomach	It is a muscular organ that mixes the food with acidic and digestive juices (enzymes) until the food becomes a soupy liquid.
Liver and pancreas	They pour juices into the small intestine that help break down food into nutrients.
Small intestine	The nutrients are absorbed through the walls of the small intestine to enter into the tiny blood vessels.
Large intestine	It is an organ that absorbs water from the undigested food.
Anus	The solid waste (stool) leaves the body through it.
Nose	It is the first organ of the respiratory system through which air enters the body.
Trachea	It is a tube that allows air to pass to the two lungs and it is divided into two bronchi at its end.
Two bronchi	They allow air to enter the two lungs and they are divided into smaller tubes that look like trees' branches called bronchioles.
Two lungs	They have two balloon shapes, and they are responsible for gas exchange through a structure called the alveoli.
Alveoli	They are tiny air sacs surrounded by blood vessels where oxygen is transferred through them to the blood stream.
Diaphragm	It is a large muscle that has an important role during inhalation and exhalation.
Gills	They allow fish to extract oxygen from water.
Skin	It is a structure that allows amphibians to extract oxygen from water.

3 Give a reason for:

- ① A camel stores fat in its hump.
 - To adapt to the dry and hot desert environment.
- ② The starred agama lizard is always looking for shaded areas in the desert.
 - To keep its body cool during hot, sunny days.
- ③  The penguin's body has a thick layer of fat and dense feathers.
 - To keep its body warm in the extreme cold weather.
- ④  The blood vessels in the penguin's feet weave around each other.
 - To protect its toes from freezing as the warm blood vessels heat up the cold blood vessels.
- ⑤ Desert lizards have colorful scales.
 - To hide among the colorful rocks in the desert.
- ⑥ A fennec fox has tan-colored fur.
 - To hide and blend in with the desert environment.
- ⑦  A polar bear has white fur.
 - To hide and blend in with the snow.
- ⑧  A polar bear has thick fur.
 - To keep its body warm in the cold weather.
- ⑨ Brown bears and black bears have dark fur.
 - To hide among the trees in the forest.
- ⑩  Some animals have the ability to use camouflage strategy.
 - To hide from their predators or sneak up on their prey.
- ⑪  An Arctic fox has short ears and legs.
 - To stay warm in the cold weather.
- ⑫  A fennec fox has extra-large ears.
 - To lose heat and cool its body.
- ⑬  A fennec fox pants like a dog.
 - To cool its body.
- ⑭ An Arctic fox has thick fur.
 - To keep its body warm in extreme cold weather.

- 15  The fur of the Arctic fox is white in winter and brown in summer.
- To sneak up on its prey in any season.
- 16 Fennec foxes hide in burrows during the day.
- To stay cool during hot, sunny days in the desert.
- 17 Arctic foxes hide in burrows at night.
- To stay warm during cold nights in tundra.
- 18 Both fennec foxes and Arctic foxes eat different kinds of food.
- Because it is hard to find food in the hot desert or the tundra desert.
- 19  Bull sharks have less competition for finding food in fresh water.
- Because other types of sharks live in salt water only.
- 20 Bull sharks use a camouflage strategy called countershading in hunting.
- To sneak up on their prey during hunting.
- 21 The eyes of a panther chameleon move independently (in different directions).
- Because the panther chameleon uses one eye to find food and the other eye to avoid danger.
- 22  A panther chameleon has V-shaped feet and a tail like a hand.
- To hold the branches of trees tightly.
- 23  Acacia trees have very long roots that grow downward (taproots).
- To get water from the deep soil.
- 24 The branches of acacia trees gather on the top of its trunk.
- To prevent animals from reaching their leaves.
- 25 Acacia trees have sharp spines around their leaves.
- To prevent animals from eating their leaves.
- 26 Acacia trees use wind to communicate with other trees.
- To send smelly messages to nearby acacia trees to produce poison if there is danger nearby.
- 27  A kapok tree has large, wide roots that grow up around the trunk (buttress roots).
- To fix the tree firmly in the soggy soil.

- ②8 A kapok tree has hand-shaped leaves.
- To allow wind to move gently through its leaves without cutting them.
- ②9 A pine tree has a triangular shape and short branches.
- To allow the snow to slide on it without breaking its branches.
- ③0  Water lilies have wide floating leaves.
- To absorb a large amount of sunlight.
- ③1 Mangrove trees have long and strong roots.
- To resist the water waves.
- ③2 Palm trees have thick roots and small leaves.
- To resist the strong wind.
- ③3 Barbary figs have sharp spines.
- To prevent animals from eating their fruits and leaves.
- ③4 The human body is made up of different systems.
- To perform different functions and to keep living organisms alive.
- ③5 The human body needs energy.
- To survive, grow, and carry out vital processes.
- ③6 The teeth play an important role in digestion.
- Because teeth break down food into smaller pieces.
- ③7 The tongue plays an important role in digestion.
- Because the tongue mixes the food with saliva.
- ③8 Saliva plays an important role in swallowing food.
- Because saliva moistens the food to facilitate its swallowing.
- ③9 The juices of the liver and pancreas are important.
- To help in breaking down food into nutrients.
- ④0 The small intestine is an important organ in the digestive system.
- Because the nutrients are absorbed through the walls of the small intestine to enter the blood.
- ④1 The large intestine is an important organ in the digestive system.
- Because it absorbs water from the undigested food and turns it into solid waste.
- ④2 The anus is an important organ in the digestive system.
- Because solid waste leaves the body through it.

- 43  The inhaled air differs from the exhaled air.
- Because the inhaled air is rich in oxygen gas, while the exhaled air is rich in carbon dioxide gas.
- 44 The diaphragm plays an important role in the respiration process.
- Because during inhalation, the diaphragm contracts and moves downward, while during exhalation, the diaphragm relaxes and moves upward.
- 45  Gills are unique structural adaptation in fish.
- Because they enable fish to absorb oxygen from water.
- 46 Car and factory exhausts have bad effects on the environment.
- Because they produce smog, which causes damage to the lungs, asthma, and breathing problems.
- 47  Frogs can live in water.
- Because their skin can absorb oxygen gas from the water.
- 48 The dry season is very harmful for amphibians.
- Because their skin must be wet all the time to extract oxygen gas from water.
- 49 Pollution of air and water can affect the survival of amphibians.
- Because they breathe oxygen gas from water and air, so they are sensitive for any pollution.
- 50 Scientists must study how amphibians interact with their environments.
- To help them survive and protect them from extinction.

4 What happens if:

- 1 The penguin has no feathers or a fat layer on its body?
- It cannot adapt to the cold weather and it will die.
- 2 The warm blood vessels and cold blood vessels in the penguins' feet do not weave around each other?
- The penguins' toes will freeze.
- 3 The polar bear has thin fur instead of thick fur?
- It cannot adapt to the cold weather and it will die.

- ④  **The polar bear has dark fur instead of white fur?**
- It will not be able to hide from its prey, so it can't get food.
- ⑤ **The Arctic fox has a white coat during all seasons of the year?**
- It cannot hide from its prey in summer, so it can't get food.
- ⑥  **A fennec fox has short ears?**
- It will not be able to cool its body.
- ⑦  **An Arctic fox has long ears?**
- It will not be able to warm its body.
- ⑧ **The sense of hearing becomes weak in foxes?**
- They cannot hunt their prey.
- ⑨  **A bull shark moves from an area of salt water to an area of fresh water?**
- It will find less competition in finding food.
- ⑩ **A panther chameleon is exposed to danger?**
- It puffs up its body with air, opens its mouth wide, and changes the color of its scales.
- ⑪  **The length of the acacia taproots is short?**
- The roots cannot get water deep in the soil.
- ⑫  **There are no buttress roots in the kapok tree?**
- The kapok tree cannot stay firmly in the soggy soil.
- ⑬ **A pine tree doesn't have a triangular shape?**
- The snow will break its branches.
- ⑭ **The trunk of a kapok tree becomes very short?**
- The kapok tree won't get the needed sunlight, so it will die.
- ⑮ **A water lily has narrow leaves instead of wide leaves?**
- It cannot absorb a large amount of sunlight.
- ⑯ **A mangrove tree has short and weak roots?**
- It cannot resist the water waves.
- ⑰ **A barbary fig has no spines?**
- Animals will eat its fruits easily.

18) The small intestine doesn't exist in the human body?

- Nutrients will not be produced and the digestive system cannot perform its functions.

19) The diaphragm moves downward during inhalation?

- The chest size increases and the air rich in oxygen gas enters the lungs.

20) The diaphragm moves upward during exhalation?

- The chest size decreases and the air rich in carbon dioxide gas comes out of the lungs.

21) The exhausts from cars and factories increase in big cities?

- Smog increases, causing breathing problems, damage of lungs, asthma, and heart diseases.

22) Water pollution increases (for human and fish)?

- Humans cannot find clean water to drink, and fish will die.

23) Water pollution increases in the natural habitat of amphibians?

- The number of amphibians will decrease.

24) The skin of frogs becomes dry?

- They cannot survive and they will die.

5 Summary

Adaptations

They are the characteristics that help living organisms survive and reproduce in their **ecosystem**.

- If a living organism **adapts**, it **survives** and **reproduces**.
- If a living organism **can't adapt**, it **dies** or goes **extinct**.

Types of Adaptations:

Structural Adaptation

- It is a change in a living organism's **body structure** to help it survive.

- 1 Polar bears have white fur.
- 2 Blood vessels in a penguin's feet.
- 3 Camel stores fat in hump.

Behavioral Adaptation

- It is a change in a living organism's **behavior or acts** to help it survive.

Examples:

- 1 Bird migration
- 2 Desert lizards look for shade.

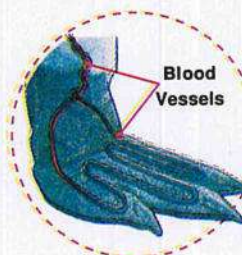
1 Adaptation in Animals:

Penguin Habitat (Antarctica)



Penguin's body:

A penguin has a **thick fat layer** and **dense feathers** on its body to keep its body warm in the cold weather.



Penguin's feet:

- 1 Blood vessels bring **cold** blood **up** from the feet to the body.
- 2 Other blood vessels bring **warm** blood **down** from the body to the feet.
- 3 The blood vessels **weave around each other**, so the warm blood vessels **heat up** the cold blood vessels and the **heat transfers** to the penguin's feet.

Camouflage

It is a type of adaptation in which an animal blends in with the surrounding environment to hide from **predators** or sneak up on its **prey**.

		Habitat	Way of Adaptation
1 Polar Bear		Arctic Regions	It has thick fur. To keep its body warm. It has white fur. To blend in with the snow to sneak up on the prey.
2 Black Bear and Brown Bear		Forests	They have dark fur. To hide among trees during hunting.
3 Caracal and Fennec Fox		Deserts	They have tan-colored fur. To hide and blend in with the desert environment.
4 Desert lizards		Deserts	They have colorful scales. To hide among the rocks in the desert.

Bull Shark

Lives in fresh and salt water



Structural Adaptation	• Its body is adapted to survive in salt water and fresh water. • It uses a camouflage strategy called "countershading", as it has a dark back and a white belly to sneak up on the prey. • It has sharp teeth to cut the prey's flesh.
Behavioral Adaptation	• It can hunt during the day and at night to surprise its prey. • It feeds on different types of food (It has a varied diet).

Note: In fresh water, a bull shark has less competition for finding food.

		1 Fennec Fox (Habitat: Desert)	2 Arctic Fox (Habitat: Tundra)
			In Winter  In Summer 
Structural Adaptation	Fur	It has tan (sandy) fur. To hide in the desert environment.	It has a thick fur coat. To stay warm. It has white fur in winter and brown fur in summer. To hide from the prey in any season.
	Ears	It has extra-large ears. To lose heat and cool its body.	It has short ears and legs. To help it stay warm.
Behavioral Adaptation		It pants like dogs. To cool its body.	
		They hide in burrows to overcome extreme climate, where: • A fennec fox stays cool in burrows on sunny days . • An Arctic fox stays warm in burrows at night . They eat different kinds of food (they have a varied diet), such as insects , fruits , plant roots and prey remains . Because it is hard to find any food in the desert.	

Panther Chameleon

Habitat: Tropical rainforests

Structural Adaptation	• It has bright-colored scales. - To blend in with the green leaves and colorful flowers. • Its eyes move in opposite directions independently. - One eye searches for food, and the other eye avoids danger. • It has V-shaped feet and a tail like a hand. - To hold the branches of trees tightly.	
Behavioral Adaptation	In danger, it scares its attacker by: - Puffing up its body with air. - Opening its mouth wide. - Changing its scales color.	

② Adaptation in Plants:

- Plants can grow **everywhere**, and they have **structural** and **behavioral** adaptations, like animals, that help them **survive** in different environments.



Some Structural Adaptations of Different Plants

Plant	Habitat	Structural Adaptation	Reason
① Water Lily	Wetland (Fresh water)	• It has wide leaves floating on the water.	• To absorb a lot of sunlight.
② Palm Tree	Desert	• It has a thick trunk and narrow leaves.	• To resist the strong wind.
③ Pine Tree	Snow	• It has a triangular shape and short branches.	• To allow the snow to slide easily over the branches without breaking them.
		• It has needles instead of leaves.	• To prevent water loss.
④ Mangrove Tree	Salt water	• It has long and strong roots.	• To resist the water waves.
⑤ Barbary Fig	Desert	• It has sharp spines and a tough outer cover.	• To prevent animals from eating its leaves and fruits.

P.O.C.	Acacia Tree	Kapok Tree
		
Habitat	Savannah (In Africa) • It is a grassland habitat. • The temperature is mild. • There is a lack of water (drought conditions).	Amazon rainforests (In Brazil) • It has soggy soil. • It is characterized by strong winds. • There is a plenty of water (it is easy to find water).
Shape	Both of them are “ umbrella-shaped trees. ”	
Structural Adaptation		
Roots	• Taproot (grows downwards) - It reaches 35 meters below the surface. To search for water deep in the soil.	• Buttress roots (grow upwards) - To fix the tree firmly in the soggy soil.
Trunk	• Its trunk stores water, just as camels store fat in their humps. • It has a very long trunk, so most animals, except giraffes, can't reach its leaves.	• The length of the tree exceeds 70 meters to reach the sunlight.
Leaves	• It has tiny leaves To hold water. • It has sharp spines To protect it.	• It has hand-shaped leaves with narrow parts. To allow the wind to move gently without tearing them.
Behavioral Adaptation		
	When a giraffe eats its leaves: • It produces poison. • It sends smelly messages to nearby trees to start producing the same poison.	It sends messages through the wind, to spread: • Its delicious-smelling flowers to attract bats. • The tree's fluffy yellow seeds.

Human Digestive System

Digestion

It is the process of breaking down food into smaller pieces to provide the body with nutrients.

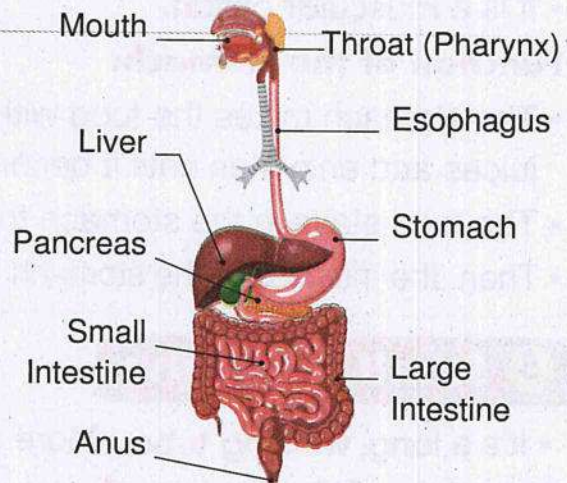
Function of the digestive system:

The digestive system breaks down the food so the body can use it to get energy.

Important Note:

- The digestive system starts with the **mouth** and ends with the **anus**.

Digestion Process Pathway:



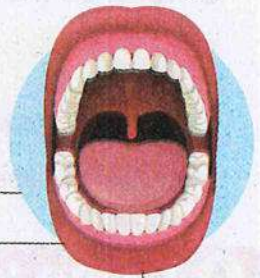
How does the digestive system work?

1 Mouth

- The digestion of food starts in the **mouth**.

Mouth contains:

- | | |
|---------------|---|
| Teeth | • They crush (break) the food during chewing. |
| Saliva | • It is a liquid substance that moistens the food.
• It breaks down the food chemically . |
| Tongue | • It mixes the crushed food with saliva. |



2 Pharynx (Throat)

- When you swallow, your throat pushes the food into the esophagus.



3 Esophagus

- It is a **long, muscular tube** that pushes food down to the stomach.

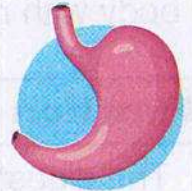


4 Stomach

- It is a **muscular organ**.

Function of the stomach:

- The stomach mixes the food with the acidic digestive juices and enzymes until it becomes a **soupy liquid**.
- The food stays in the stomach for a **few hours**.
- Then, the muscles of the stomach move the food into the **small intestine**.



5 Small Intestine

- It's a **long, winding tube**. (More than **six meters** long)

Function of the liver and pancreas:

- They pour juices into the small intestine that help break down food into **nutrients**.

Function of the small intestine:

- The nutrients are absorbed through the walls of the small intestine to enter into the tiny blood vessels.

Then:

- The **digested food (nutrients)** is carried by the **blood** to all body parts.
- The **undigested food** flows into the **large intestine**.



6 Large Intestine

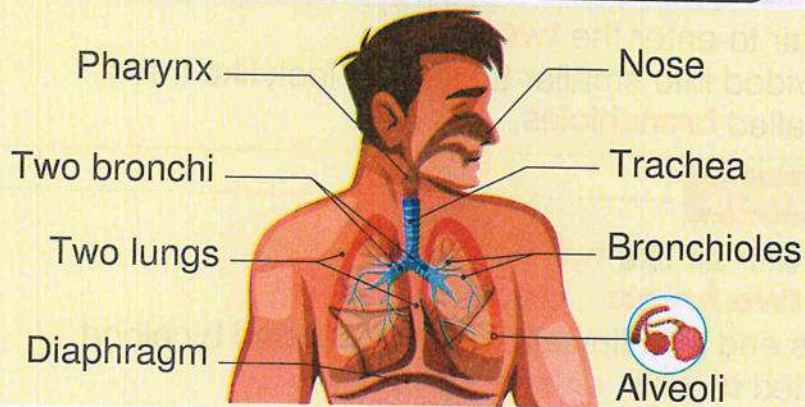
- It's a **wide tube** that starts at the end of the small intestine and ends with the anus.

Function of the large intestine:

- It absorbs **water** from the undigested food so it becomes solid waste.
- Solid waste leaves the body through the **anus**.



Human Respiratory System



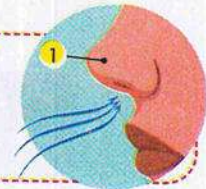
Respiration Pathway



How does the respiratory system work?

1 Nose

- The nose is the **first organ** of the respiratory system.
- Air enters the body through the **nose** and **mouth**.



2 Throat (Pharynx)

- It exists in the **digestive** and **respiratory** systems.
- It is a common path for **food** and **air**.

The pharynx moves **air** into the **trachea**.



The pharynx moves **food** into the **esophagus**.

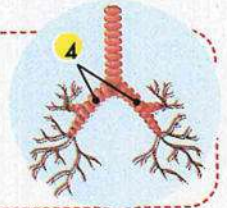
3 Trachea

- It's a tube that allows air to pass to the **two lungs**.
- Inside the lungs, the trachea is branched into two smaller tubes called "**two bronchi**".



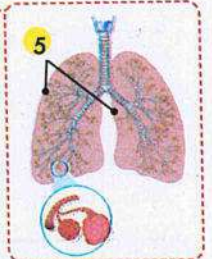
4 Two Bronchi

- They allow air to enter the **two lungs**.
- They are divided into smaller tubes that look like trees' branches, called **bronchioles**.



5 Two Lungs

- They fill up with air like **two balloons**.
- **Inside the two lungs:**
Bronchioles end with tiny air sacs surrounded by blood vessels called **alveoli**.
- **Inside the blood vessels:**
Oxygen moves into the blood, which carries oxygen to all body parts.

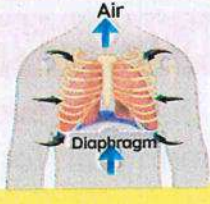


6 Diaphragm

- It's a **large muscle** at the base of the ribs that has an important role during inhalation and exhalation.



Respiration includes:

Inhalation Process "Pulling the air in"	Exhalation Process "Pushing the air out"
	
Diaphragm	
Moves downward (Shrinks or contracts)	Moves up (Relaxes or expands)
Chest Size	
Increases (Enlarges)	Decreases (Becomes narrower)
Type of Air	
Air rich in oxygen gas enters the lungs.	Air rich in carbon dioxide gas is expelled out the lungs.
Pathway of Air	
Nose → Pharynx → Trachea → Lungs	Lungs → Trachea → Pharynx → Nose

Respiration in Humans, Fish and Amphibians

	Humans 	Fish 
Differences	Humans have lungs to inhale oxygen gas from air .	Fish have gills to inhale oxygen gas from water .
Similarities	- Both of them inhale oxygen gas and exhale carbon dioxide gas. - Blood carries oxygen gas to all body parts.	

How do fish breathe?

- Fish have **gills** to breathe underwater.
- Gills are found on both sides of a **fish's head**.
 - Water enters the mouth of a fish and passes across the gills.
 - The blood vessels in the gills carry oxygen gas to the rest of the body and release carbon dioxide gas.



Amphibians

They are small animals that live **in water** and **on land**.

Habitat: Moist environment (rainforests – streams – ponds)

Frogs



Toads



Salamanders



Respiration in Amphibians

On Land

- Adult amphibians inhale oxygen gas from the air through their **lungs** (like humans).

In Water

- They can extract oxygen gas from the water using their **skin**.

Factors that cause extinction of amphibians:

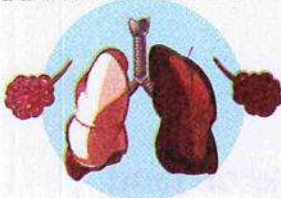
- Air pollution
- Water pollution (Viruses in water)

Human Activities that Change the Environment:

- 1 Cutting down forests
- 2 Plowing grasslands or clearing lands
- 3 Building communities
- 4 Air pollution (cars exhausts and factory pollution)
- 5 Water and soil pollution (dumping waste into waterways or soil)
- 6 Introducing plants and animals to new ecosystems

People living in cities are exposed to a high level of air pollution for long periods of time, so they will suffer from:

Lung damage



Asthma



Heart problems



Living organisms are affected by changes in the ecosystem.

Animals	Some animals can survive by moving to another ecosystem.
Plants	Plants must rely on their seeds landing in a better place for them to survive and grow.
Humans	1 Air pollution (smog) makes it hard for humans to breathe. 2 Water pollution makes it hard for human to find clean water. 3 Soil pollution makes the crops not grow.

The role of humans to help restore the ecosystem:

1
Replanting cleared
forests

2
Removing air and
water pollutants

3
Preserving native
plants and animals

1.1

- 1

- 9 Animals that live in a hot environment have ears to allow heat to escape for cooling.

a. small

b. short

c. long

d. sharp

(Cairo 2022)
- 10 The fur of a fennec fox protects it from the

a. wind

b. rains

c. hot climate

d. cold weather

(Alex 2024)
- 11 A panther chameleon uses its like a hand.

a. eyes

b. tail

c. head

d. ears

(Damnhour 2023)
- 12 All the following properties help an Arctic fox stay warm, except its

a. thick fur coat

b. short ears

c. tan-colored coat

d. short legs

(Qena 2022)
- 13 Both acacia trees and kapok trees have the same

a. habitat

b. shape

c. roots

d. trunk

(Kafr El-Sheikh 2023)
- 14 From the structural adaptations of a water lily plant is that it has.

a. long roots

b. needle leaves

c. tiny leaves

d. wide leaves

(Beni Suef 2024)
- 15 Mangrove trees grow in

a. fresh water only

b. salty water only

c. both a and b

d. no correct answer

(Cairo 2023)
- 16 Digestion process begins in the

a. stomach

b. esophagus

c. mouth

d. small intestine

(Alex. 2024)
- 17 The long winding tube that is more than 6 meters in length is called the

a. small intestine

b. esophagus

c. large intestine

d. stomach

(Suez 2023)
- 18 Digestion process begins in the

a. stomach

b. esophagus

c. mouth

d. small intestine

(Alex. 2024)

- (Behira 2024)

Q2. Put (✓) or (X):

- 1 An agama lizard blends in green and huge trees to hide from its enemies. ()
(Giza 2023)
- 2 The feet of a penguin do not freeze because they have a layer of fat. ()
(Suez 2023)
- 3 Thick white fur is an adaptation found in bears that live in polar regions. ()
(Suez 2023)
- 4 Black bears have dark fur to hide among trees. ()
(Giza 2024)
- 5 The penguin is a bird and it can fly. ()
(Giza 2024)
- 6 Fennec foxes live in deserts, while caracals live in forests. ()
(Cairo 2023)
- 7 The sandy-colored fur of a caracal helps it blend in the snow in polar environments. ()
(Beni Suef 2024)
- 8 A fennec fox has sandy-colored fur to help it make camouflage. ()
(Beni Suef 2024)
- 9 Thick white fur is a structural adaptation in polar bears. ()
(Suez 2024)
- 10 Foxes have a strong sense of hearing. ()
(Alex. 2024)
- 11 The behavioral adaptation is a change in the body structure of a living organism to help it survive. ()
(Damietta 2023)
- 12 The ears of an Arctic fox are longer than those of a fennec fox. ()
(Sohag 2023)
- 13 All type of sharks live in fresh water. ()
(North Sinai 2023)
- 14 Animals can't eat barbary fig due to its sharp spines. ()
(Damietta 2024)

- 15 The hand-shaped leaves of the kapok tree are considered a behavioral adaptation. ()
(Minia 2023)
- 16 The sharp spines protect barbary figs from hungry animals. ()
(Cairo 2023)
- 17 Desert plants are characterized by their big leaves. ()
(Port Said 2023)
- 18 Mangrove trees adapt to resist the water waves through their long, strong roots. ()
(Sharkia 2022)
- 19 The food passes through the large intestine before it goes into the small intestine. ()
(Sohag 2022)
- 20 Food passes from the mouth to the stomach through a narrow tube known as the small intestine. ()
(Gena 2022)
- 21 The digestion process begins in the stomach with the help of saliva. ()
(Giza 2024)
- 22 The inhaled air is rich in carbon dioxide gas, while the exhaled air is rich in oxygen gas. ()
(Menofia 2023)
- 23 Humans need food and oxygen gas to get energy. ()
(Suez 2023)
- 24 The diaphragm has an important role during inhalation and exhalation. ()
(Qalyoubia 2024)
- 25 The exhaled air contains oxygen gas. ()
(Azhar – Cairo 2024)
- 26 During inhalation, the diaphragm muscle relaxes and moves up. ()
(Giza 2024)
- 27 Fish use their lungs to breathe oxygen gas from water. ()
(Red Sea 2024)
- 28 Water pollution affects fish, but doesn't affect humans or plants. ()
(Suez 2023)

29 Frogs are reptiles, while panther chameleons are amphibians. ()

(Suez 2023)

30 Amphibians include frogs and salamanders. ()

(Alex. 2023)

Q3. Write the scientific term:

1 They are the characteristics that help living organisms survive and reproduce. (.....)

(Ismailia 2023)

2 It's a type of adaptation that helps the animals hide. (.....)

(Alex. 2023)

3 It covers the bodies of some types of bears to help them blend in with the snow and keep them warm. (.....)

(Luxor 2023)

4 It's a fox that changes its fur color between winter and summer. (.....)

(Alex. 2024)

5 It's a type of fox that has tan-colored fur. (.....)

(Behiera 2023)

6 It's a reptile whose body is covered in colorful scales and has V-shaped feet. (.....)

(Cairo 2023)

7 It's a tree that grows in Amazon rainforests. (.....)

(Giza 2024)

8 They are structural adaptations that fix the kapok tree in soggy soil and support its trunk (.....)

(Red Sea 2023)

9 It's a tree in the Savannah that adapted to send smelly messages to warn other trees from animals. (.....)

(Alex. 2024)

10 It is a tree that is found in snow and has a triangle shape. (.....)

(Menoufia 2024)

11 It's the first organ in the digestive system. (.....)

(Giza 2024)

- 12 It's a muscle that has an important role in the respiration process.
(.....)
(Cairo 2023)
- 13 It's the process of breaking down food into smaller parts that the body can use to get energy and grow.
(.....)
(Cairo 2023)
- 14 It's an organ through which solid waste of the digestion process leave the body.
(.....)
(Luxor 2023)
- 15 It's the first organ of the respiratory system.
(.....)
(Giza 2024)
- 16 It allows the air to pass from the nose to the trachea. (.....)
(Alex. 2023)
- 17 They're little air sacs surrounded by blood vessels in the respiratory system.
(.....)
(Behira 2024)
- 18 It's a gas found in both air and water that is very important for breathing.
(.....)
(Behira 2022)
- 19 They are species of living organisms that can live on land and in water.
(.....)
(Alex. 2024)

Q4. Complete the following sentences:

- 1 A penguin's body can keep itself warm through a thick layer of and dense
(Aswan 2023)
- 2 Animals with a thick layer of fat under their skin are found in environments.
(Cairo 2023)
- 3 The white fur of a polar bear helps the animal with its ice habitat.
(Alex. 2023)
- 4 Forest bears have or fur, while polar bears have fur.
(Cairo 2023)

- 5 Some butterflies have the same color of the tree, this phenomenon is called (Cairo 2023)
- 6 A type of adaptation that some animals use to hide is (Sharkia 2023)
- 7 Among the animals that can live in polar environments are and (Beni Suef 2024)
- 8 Bull sharks use a strategy called to sneak up on their prey. (El-Behira)
- 9 The colorful scales of desert lizards are considered a adaptation. (Suez 2023)
- 10 The ability of a chameleon's eyes to move independently of each other is considered a adaptation. (Behira 2022)
- 11 Panting is considered a adaptation in living organisms. (Azhar – Cairo 2024)
- 12 A can live in both fresh and salty water. (Cairo 2022)
- 13 puff up (blow) their bodies with air to scare their enemies. (Cairo 2022)
- 14 Fennec foxes have fur that helps them blend into their desert environment. (Behira)
- 15 trees have long and strong roots to resist water waves. (Menoufia 2023)
- 16 The hand-shaped leaves of kapok trees allow to flow through them gently. (Gharbia 2023)
- 17 Drought regions are characterized by a lack of, so their plants adapt by developing very long roots. (Gharbia 2024)
- 18 have taproots to search for water. (Helwan 2024)
- 19 The leaves of water lilies are wide in order to on the water surface and to absorb a large amount of (Ismailia 2022)
- 20 Acacia trees have around their leaves to protect themselves from animals that may try to eat them. (Beni Suef 2023)
- 21 The leaves of trees look like your hand. (Port Said 2023)

- 22 The and mix and grind food inside the mouth.
(Cairo 2023)
- 23 Food is digested completely in the
(Dakahlia 2024)
- 24 Air enters and exits the human body through the system.
(Cairo 2022)
- 25 During exhalation, gas comes out of the lungs.
(Cairo 2023)
- 26 During the process, the diaphragm relaxes. (Assiut 2023)
- 27 The process of pulling air in and pushing air out of the body is called
(Suez 2023)
- 28 Fish take gas from the water by their
(Qalyoubia 2024)
- 29 Fish have to breathe. (Menoufia 2023)
- 30 Humans use their to breathe, while fish use their to breathe.
(Cairo 2023)

Q5. Cross out odd word:

- 1 Penguin – Polar bear – Fennec fox – Arctic fox (Sohag 2023)
- 2 Fenne fox – Desert lizard – Caracal – Chameleon (Menoufia 2024)
- 3 Small intestine – Stomach – Trachea – Large intestine (Cairo 2024)
- 4 Mouth – Lungs – Stomach – Large intestine (Cairo 2024)
- 5 Stomach – Diaphragm – Large intestine – Esophagus
(Alex. 2023)

Q6. Give reasons for:

- 1 A fennec fox has sandy-colored fur, while a polar bear has white fur.
(Minia 2023)
-
- 2 Some animals make camouflage. (Cairo 2024)
-

- 3 A polar bear has thick fur. (Red Sea 2024)
.....
- 4 A fennec fox pants like a dog (undergoes panting). (Cairo 2024)
.....
- 5 A fennec fox has extra-large ears. (Menoufia 2024)
.....
- 6 A panther chameleon has V-shaped feet and a long tail. (Assiut 2023)
.....
- 7 An Arctic fox has a thick fur coat. (Damietta 2024)
.....
- 8 An Arctic fox has short ears. (Menoufia 2023)
.....
- 9 The body of a chameleon is covered with colored scales. (Alex. 2023)
.....
- 10 Water lilies have wide floating leaves. (Sharkia 2022)
.....
- 11 A barbary fig has sharp spines. (Sharkia 2023)
.....
- 12 Mangrove trees have long and strong roots. (Cairo 2023)
.....
- 13 An acacia tree has sharp spines around its leaves. (Alex. 2024)
.....
- 14 A kapok tree has hand-shaped leaves. (Giza 2023)
.....
- 15 The inhaled air is different from the exhaled air. (Suez 2024)
.....

Q7. What happens if:

- 1 Animals can't adapt in their environment? (Cairo 2023)
.....
- 2 An animal tries to eat the acacia leaves?
.....
- 3 The diaphragm moves downward during inhalation? (Menoufia 2024)
.....
- 4 The diaphragm moves upward during exhalation? (Cairo 2023)
.....

Q8. What is the type of adaptation?

- 1 Changing the color of fur of the Arctic fox (Menoufia 2024) (.....)
- 2 The presence of fats under the skin of an animal to warm its body (Assiut 2023) (.....)
- 3 A panther chameleon puffs up its body with air to appear bigger in size. (Beni Suef 2023) (.....)
- 4 The V-shaped feet of a panther chameleon (Giza 2023) (.....)
- 5 The tan-colored fur of a fennec fox (Port Said 2023) (.....)
- 6 The migration of birds to search for food (.....)
(Qalyoubia 2022) (Assiut 2023)
- 7 The fennec fox during its panting (Cairo 2023) (.....)
- 8 Acacia trees have very long roots to search for water. (.....)
(Suez 2023)
- 9 The spine-like leaves of some plants like acacia trees (.....)
(Giza 2024)
- 10 Sending a smelly message from an acacia tree to other trees (.....)
(Giza 2023)

1.1

G

- Adaptation helps living organisms in all the following, except

a. survival	b. hiding
c. <u>death</u>	d. reproduction (Cairo 2022)
- A penguin's feet have blood vessels that bring from its feet towards its body.

a. warm water	b. <u>cold blood</u>
c. warm blood	d. cold water (Alex. 2023)
- The warm blood transfers to a penguin's feet through its

a. <u>blood vessels</u>	b. skin
c. head	d. feathers (Cairo 2022)
- Fennec foxes and caracals have that help them blend in with the desert landscapes.

a. colorful scales	b. thick, white fur
c. sandy feathers	d. <u>sandy-colored fur</u> (South Sinai 2023)
- The presence of thick white fur is an adaptation in

a. <u>polar bears</u>	b. forest bears
c. desert lizards	d. bats (Cairo 2024)
- is considered a behavioral adaption in living organisms.

a. Having long ears	b. Having thick fur
c. Having short legs	d. <u>Living in burrows</u> (Dakahlia 2024)
- cover(s) the body of the Arctic fox.

a. Heavy hair	b. Heavy skin
c. <u>Thick fur</u>	d. Many feathers (Cairo / Suez 2023)
- pant to lower their body temperature.

a. Whales	b. Lions
c. <u>Foxes</u>	d. Bats (Cairo 2022)

- 9 Animals that live in a hot environment have ears to allow heat to escape for cooling.
a. small
b. short
c. **long**
d. sharp (Cairo 2022)
- 10 The fur of a fennec fox protects it from the
a. wind
b. rains
c. **hot climate**
d. cold weather (Alex 2024)
- 11 A panther chameleon uses its like a hand.
a. eyes
b. **tail**
c. head
d. ears (Damnhour 2023)
- 12 All the following properties help an Arctic fox stay warm, except its
a. thick fur coat
b. short ears
c. **tan-colored coat**
d. short legs (Qena 2022)
- 13 Both acacia trees and kapok trees have the same
a. habitat
b. **shape**
c. roots
d. trunk (Kafr El-Sheikh 2023)
- 14 From the structural adaptations of a water lily plant is that it has.
a. long roots
b. needle leaves
c. tiny leaves
d. **wide leaves** (Beni Suf 2024)
- 15 Mangrove trees grow in
a. fresh water only
b. **salty water only**
c. both a and b
d. no correct answer (Cairo 2023)
- 16 Digestion process begins in the
a. stomach
b. esophagus
c. **mouth**
d. small intestine (Alex. 2024)
- 17 The long winding tube that is more than 6 meters in length is called the
a. **small intestine**
b. esophagus
c. large intestine
d. stomach (Suez 2023)
- 18 Digestion process begins in the
a. stomach
b. esophagus
c. **mouth**
d. small intestine (Alex. 2024)

- 19 Crushing the food in your mouth is the function of your
 a. stomach
 b. tongue
 c. saliva
 d. teeth (Behira 2022)
- 20 The organ that moves the food into the stomach is the
 a. mouth
 b. tongue
 c. esophagus
 d. small intestine (Alex. 2023)
- 21 The undigested food passes from the small intestine into the
 a. liver
 b. pancreas
 c. brain
 d. large intestine (Suez 2022)
- 22 All the following are organs of the digestive system, except the
 a. mouth
 b. nose
 c. stomach
 d. esophagus (Suez 2024)
- 23 The absorption of nutrients in the digestive system occurs in the
 a. small intestine
 b. large intestine
 c. esophagus
 d. pharynx (Behira 2024)
- 24 The passe(s) food from the pharynx to the stomach.
 a. esophagus
 b. stomach
 c. trachea
 d. alveoli (Alex. 2023)
- 25 Oxygen gets into the lungs during the process.
 a. digestion
 b. exhalation
 c. inhalation
 d. excretion (Beni Suif 2023)
- 26 All the following organs belong to the respiratory system, except the
 a. nose
 b. two bronchi
 c. two lungs
 d. stomach (Alex. 2024)
- 27 Fish extract dissolved oxygen gas from water by using their
 a. lungs
 b. gills
 c. skin
 d. nose (Alex – East 2024)
- 28 Gills in fish are considered as adaptation(s).
 a. behavioral
 b. structural
 c. camouflage
 d. behavioral and structural (Behira 2024)

Q2. Put (✓) or (X):

- 1 An agama lizard blends in green and huge trees to hide from its enemies. (X)
(Giza 2023)
- 2 The feet of a penguin do not freeze because they have a layer of fat. (X)
(Suez 2023)
- 3 Thick white fur is an adaptation found in bears that live in polar regions. (✓)
(Suez 2023)
- 4 Black bears have dark fur to hide among trees. (✓)
(Giza 2024)
- 5 The penguin is a bird and it can fly. (X)
(Giza 2024)
- 6 Fennec foxes live in deserts, while caracals live in forests. (X)
(Cairo 2023)
- 7 The sandy-colored fur of a caracal helps it blend in the snow in polar environments. (X)
(Beni Suef 2024)
- 8 A fennec fox has sandy-colored fur to help it make camouflage. (✓)
(Beni Suef 2024)
- 9 Thick white fur is a structural adaptation in polar bears. (✓)
(Suez 2024)
- 10 Foxes have a strong sense of hearing. (✓)
(Alex. 2024)
- 11 The behavioral adaptation is a change in the body structure of a living organism to help it survive. (X)
(Damietta 2023)
- 12 The ears of an Arctic fox are longer than those of a fennec fox. (X)
(Sohag 2023)
- 13 All type of sharks live in fresh water. (X)
(North Sinai 2023)
- 14 Animals can't eat barbary fig due to its sharp spines. (✓)
(Damietta 2024)

- 15 The hand-shaped leaves of the kapok tree are considered a behavioral adaptation. (X)
(Minia 2023)
- 16 The sharp spines protect barbary figs from hungry animals. (✓)
(Cairo 2023)
- 17 Desert plants are characterized by their big leaves. (X)
(Port Said 2023)
- 18 Mangrove trees adapt to resist the water waves through their long, strong roots. (✓)
(Sharkia 2022)
- 19 The food passes through the large intestine before it goes into the small intestine. (X)
(Sohag 2022)
- 20 Food passes from the mouth to the stomach through a narrow tube known as the small intestine. (X)
(Gena 2022)
- 21 The digestion process begins in the stomach with the help of saliva. (X)
(Giza 2024)
- 22 The inhaled air is rich in carbon dioxide gas, while the exhaled air is rich in oxygen gas. (X)
(Menofia 2023)
- 23 Humans need food and oxygen gas to get energy. (✓)
(Suez 2023)
- 24 The diaphragm has an important role during inhalation and exhalation. (✓)
(Qalyoubia 2024)
- 25 The exhaled air contains oxygen gas. (X)
(Azhar – Cairo 2024)
- 26 During inhalation, the diaphragm muscle relaxes and moves up. (X)
(Giza 2024)
- 27 Fish use their lungs to breathe oxygen gas from water. (X)
(Red Sea 2024)
- 28 Water pollution affects fish, but doesn't affect humans or plants. (X)
(Suez 2023)

- 29 Frogs are reptiles, while panther chameleons are amphibians. (X)
(Suez 2023)
- 30 Amphibians include frogs and salamanders. (✓)
(Alex. 2023)

Q3. Write the scientific term:

- 1 They are the characteristics that help living organisms survive and reproduce. (Adaptations)
(Ismailia 2023)
- 2 It's a type of adaptation that helps the animals hide. (Camouflage)
(Alex. 2023)
- 3 It covers the bodies of some types of bears to help them blend in with the snow and keep them warm. (Thick white fur)
(Luxor 2023)
- 4 It's a fox that changes its fur color between winter and summer. (Arctic fox)
(Alex. 2024)
- 5 It's a type of fox that has tan-colored fur. (Fennec fox)
(Behiera 2023)
- 6 It's a reptile whose body is covered in colorful scales and has V-shaped feet. (Panther chameleon)
(Cairo 2023)
- 7 It's a tree that grows in Amazon rainforests. (Kapok tree)
(Giza 2024)
- 8 They are structural adaptations that fix the kapok tree in soggy soil and support its trunk (Buttress roots)
(Red Sea 2023)
- 9 It's a tree in the Savannah that adapted to send smelly messages to warn other trees from animals. (Acacia tree)
(Alex. 2024)
- 10 It is a tree that is found in snow and has a triangle shape. (Pine tree)
(Menoufia 2024)
- 11 It's the first organ in the digestive system. (Mouth)
(Giza 2024)

- 12 It's a muscle that has an important role in the respiration process.
(Diaphragm)
(Cairo 2023)
- 13 It's the process of breaking down food into smaller parts that the body can use to get energy and grow.
(Digestion process)
(Cairo 2023)
- 14 It's an organ through which solid waste of the digestion process leave the body.
(Anus)
(Luxor 2023)
- 15 It's the first organ of the respiratory system.
(Nose)
(Giza 2024)
- 16 It allows the air to pass from the nose to the trachea.
(Pharynx)
(Alex. 2023)
- 17 They're little air sacs surrounded by blood vessels in the respiratory system.
(Alveoli)
(Behira 2024)
- 18 It's a gas found in both air and water that is very important for breathing.
(oxygen gas)
(Behira 2022)
- 19 They are species of living organisms that can live on land and in water.
(Amphibians)
(Alex. 2024)

Q4. Complete the following sentences:

- 1 A penguin's body can keep itself warm through a thick layer of fat and dense feathers.
(Aswan 2023)
- 2 Animals with a thick layer of fat under their skin are found in cold environments.
(Cairo 2023)
- 3 The white fur of a polar bear helps the animal blend in with its ice habitat.
(Alex. 2023)
- 4 Forest bears have black or brown fur, while polar bears have white fur.
(Cairo 2023)

- 5 Some butterflies have the same color of the tree, this phenomenon is called camouflage. (Cairo 2023)
- 6 A type of adaptation that some animals use to hide is camouflage. (Sharkia 2023)
- 7 Among the animals that can live in polar environments are penguins and polar bears. (Beni Suef 2024)
- 8 Bull sharks use a strategy called countershading to sneak up on their prey. (El-Behira)
- 9 The colorful scales of desert lizards are considered a structural adaptation. (Suez 2023)
- 10 The ability of a chameleon's eyes to move independently of each other is considered a structural adaptation. (Behira 2022)
- 11 Panting is considered a behavioral adaptation in living organisms. (Azhar – Cairo 2024)
- 12 A bull shark can live in both fresh and salty water. (Cairo 2022)
- 13 Panther chameleons puff up (blow) their bodies with air to scare their enemies. (Cairo 2022)
- 14 Fennec foxes have tan or sandy-colored fur that helps them blend into their desert environment. (Behira)
- 15 Mangrove trees have long and strong roots to resist water waves. (Menoufia 2023)
- 16 The hand-shaped leaves of kapok trees allow wind to flow through them gently. (Gharbia 2023)
- 17 Drought regions are characterized by a lack of water, so their plants adapt by developing very long roots. (Gharbia 2024)
- 18 Acacia trees have taproots to search for water. (Helwan 2024)
- 19 The leaves of water lilies are wide in order to float on the water surface and to absorb a large amount of sunlight. (Ismailia 2022)
- 20 Acacia trees have spines around their leaves to protect themselves from animals that may try to eat them. (Beni Suef 2023)
- 21 The leaves of kapok trees look like your hand. (Port Said 2023)

- 22 The teeth and tongue mix and grind food inside the mouth. (Cairo 2023)
- 23 Food is digested completely in the small intestine. (Dakahlia 2024)
- 24 Air enters and exits the human body through the respiratory system. (Cairo 2022)
- 25 During exhalation, carbon dioxide gas comes out of the lungs. (Cairo 2023)
- 26 During the exhalation process, the diaphragm relaxes. (Assiut 2023)
- 27 The process of pulling air in and pushing air out of the body is called respiration. (Suez 2023)
- 28 Fish take oxygen gas from the water by their gills. (Qalyoubia 2024)
- 29 Fish have gills to breathe. (Menoufia 2023)
- 30 Humans use their lungs to breathe, while fish use their gills to breathe. (Cairo 2023)

Q5. Cross out odd word:

- 1 Penguin – Polar bear – Fennec fox – Arctic fox (Sohag 2023)
- 2 Fenne fox – Desert lizard – Caracal – Chameleon (Menoufia 2024)
- 3 Small intestine – Stomach – Trachea – Large intestine (Cairo 2024)
- 4 Mouth – Lungs – Stomach – Large intestine (Cairo 2024)
- 5 Stomach – Diaphragm – Large intestine – Esophagus (Alex. 2023)

Q6. Give reasons for:

- 1 A fennec fox has sandy-colored fur, while a polar bear has white fur. (Minia 2023)

A fennec fox has sandy-colored fur to blend in with the desert, while a polar bear has white fur to blend in with the snow in polar regions.

- 2 Some animals make camouflage. (Cairo 2024)
- To hide from predators or prey in different environments.

- 3 A polar bear has thick fur. (Red Sea 2024)
To keep its body warm.
- 4 A fennec fox pants like a dog (undergoes panting). (Cairo 2024)
To cool its body.
- 5 A fennec fox has extra-large ears. (Menoufia 2024)
To cool its body (lose heat).
- 6 A panther chameleon has V-shaped feet and a long tail. (Assiut 2023)
To hold the branches of trees tightly.
- 7 An Arctic fox has a thick fur coat. (Damietta 2024)
To keep its body warm.
- 8 An Arctic fox has short ears. (Menoufia 2023)
To stay warm.
- 9 The body of a chameleon is covered with colored scales. (Alex. 2023)
To blend in with the colorful flowers and green leaves.
- 10 Water lilies have wide floating leaves. (Sharkia 2022)
To absorb a large amount of sunlight.
- 11 A barbary fig has sharp spines. (Sharkia 2023)
To prevent animals from eating its fruits and leaves.
- 12 Mangrove trees have long and strong roots. (Cairo 2023)
To resist the water waves.
- 13 An acacia tree has sharp spines around its leaves. (Alex. 2024)
To prevent animals from eating its leaves.
- 14 A kapok tree has hand-shaped leaves. (Giza 2023)
To allow wind to move through without cutting its leaves.
- 15 The inhaled air is different from the exhaled air. (Suez 2024)
Because the inhaled air is rich in oxygen gas, while the exhaled air is rich in carbon dioxide gas.

Q7. What happens if:

- 1 Animals can't adapt in their environment? (Cairo 2023)
They may die or go extinct.
- 2 An animal tries to eat the acacia leaves?
It will produce a poison that makes the taste of the leaves very bad.
- 3 The diaphragm moves downward during inhalation? (Menoufia 2024)
The size of the chest increases and the air rich in oxygen enters the lungs.
- 4 The diaphragm moves upward during exhalation? (Cairo 2023)
The size of the chest decreases and the air rich in carbon dioxide gas comes out of the lungs.

Q8. What is the type of adaptation?

- 1 Changing the color of fur of the Arctic fox (S)
(Menoufia 2024)
- 2 The presence of fats under the skin of an animal to warm its body (S)
(Assiut 2023)
- 3 A panther chameleon puffs up its body with air to appear bigger in size. (B)
(Beni Suef 2023)
- 4 The V-shaped feet of a panther chameleon (S)
(Giza 2023)
- 5 The tan-colored fur of a fennec fox (S)
(Port Said 2023)
- 6 The migration of birds to search for food (B)
(Qalyoubia 2022) (Assiut 2023)
- 7 The fennec fox during its panting (B)
(Cairo 2023)
- 8 Acacia trees have very long roots to search for water. (S)
(Suez 2023)
- 9 The spine-like leaves of some plants like acacia trees (S)
(Giza 2024)
- 10 Sending a smelly message from an acacia tree to other trees (B)
(Giza 2023)

1 (A) Correct the underlined word:

- The long winding tube that its length is about more than six meters is called stomach. (.....)

(B) Mention one example for each of the following:

1. An amphibian.
2. A tree grows in salt water.

(C) Give a reason for:

1. The water lily has wide, floating leaves.
.....
.....
2. The body of a panther chameleon is covered with colored scales.
.....
.....

2 (A) Cross out the odd word:

- Lungs – Alveoli – Gills – Diaphragm (.....)

(B) Write the scientific term:

1. They are air sacs surrounded by blood vessels in the respiratory system. (.....)
2. It is a property that helps a living organism blend in with the surrounding environment. (.....)

(C) What happens when:

1. Polar bear has a black fur?
.....
.....
2. The skin of a frog becomes dry?
.....
.....

3 (A) Choose the correct answer:

1. If you stand barefoot on ice, you will lose feeling in your toes after a few

- (a) seconds (b) minutes (c) hours (d) days

2. Fish extract oxygen gas from the water by their

- (a) skin (b) gills (c) lungs (d) fins

(B) Complete the following sentences:

1. The penguin's body stays warm through a thick layer of and dense

2. is a common organ between the digestive and respiratory systems.

3. During exhalation, air travels up from your to your through trachea.

4 (A) Classify the following sentences into structural or behavioral adaptations:

1. Birds migrate to search for food.

2. The existence of a fat layer under an animal's skin to keep its body warm.

(B) Compare between each of the following:

P.O.C	Kapok tree	Acacia tree
Habitat		

(C) Study the animals in the following picture, then answer the following questions:

1. Why the animal in picture (2) has longer ears than that in picture (1)?



Figure (1)



Figure (2)

2. What happens to the fur color of the animal in picture (1) when snow melts?

1 (A) Cross out the odd word:

- Saliva – Stomach – Esophagus – Small intestine (.....)

(B) Mention one structural adaptation in each of the following organisms:

1. Caracal.

.....

2. Barbary fig.

.....

3. Polar bear.

.....

4. Mangrove tree.

.....

2 (A) Put (✓) or (x):

- The blood vessels in a penguin's feet are away from each other. ()

(B) Write the scientific term:

1. It is an organ through which solid waste leaves the body. (.....)

2. They are the characteristics that help living organisms survive and reproduce in their ecosystems. (.....)

3. It is the gas in air and water that living organisms breathe in during respiration. (.....)

4. It is a muscle that contracts during inhalation and expands during exhalation. (.....)

3 (A) Choose from column (A) what suits it in column (B):

Column (A)	Column (B)
1. Air pollution	(a) is good for amphibians survival.
2. Water pollution	(b) is caused by smog.
	(c) is caused due to throwing waste materials in waterways.

1. 2.

(B) Complete the following sentences:

- Acacia tree stores water in its
- Panther chameleon has a feet and a like a hand.

(C) Look at the opposite figure then answer the following questions:

- What is the camouflage strategy used by this animal to sneak up on its prey?



4 (A) Choose the correct answer:

- lives in tundra, while lives in hot desert.
 - (a) Penguin – fennec fox
 - (b) Panther chameleon – agama lizard
 - (c) Arctic-fox – brown bear
 - (d) Arctic fox – fennec fox
- has thick trunk and narrow leaves.
 - (a) Water lily
 - (b) Palm tree
 - (c) Barbary fig
 - (d) Pine tree

(B) Give a reason for:

- Some animals have the ability to make camouflage.

- Kapok tree has hand-shaped leaves.

- Pine tree has a triangular shape.

1 (A) Choose the correct answer:

- It is difficult for many plants in amazon rainforest to get

(a) air (b) water (c) sunlight (d) poison

(B) Give a reason for:

1. Bull shark has sharp teeth.

.....

2. Fennec fox has long ears, while arctic fox has short ears.

.....

3. A pine tree has needles instead of leaves.

.....

4. Liver and pancreas have an important role in food digestion.

.....

2 (A) Cross out the odd word:

- Penguin – Fennec fox – Polar bear – Arctic fox (.....)

(B) Compare between:

P.O.C	Inhalation process	Exhalation process
Movement of diaphragm		
The air is rich in		

(C) What happens if

1. Frogs have gills instead of lungs?

.....

2. Acacia tree leaves don't have sharp spines?

.....

3 (A) Put (✓) or (x):

1. The panther chameleon puffs its body with air to appear smaller in size. ()
2. The food passes through the large intestine before it goes into the small intestine. ()

(B) Mention one behavioral adaptation in each of the following organisms:

1. Acacia tree.

.....

2. Fennec fox.

.....

3. Starred agama lizard.

.....

4 (A) Choose from column (A) what suits it in column (B):

Column (A)	Column (B)
1. Salamander	Ⓐ belongs to birds.
2. Panther chameleon	Ⓑ belongs to amphibians.
	Ⓒ belongs to reptiles.

1. 2.

(B) Give a reason for:

1. Barbary fig has sharp spines.

.....

.....

2. Penguin's body is covered with dense feathers and a thick layer of fat.

.....

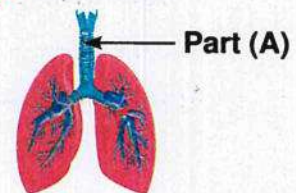
.....

(C) In the opposite figure, mention the function of part (A)?

.....

.....

.....



1 (A) Cross out the odd word:

- Barbary fig – Arctic fox – Fennec fox – Palm tree (.....)

(B) Give a reason for:

1. Fennec fox pants like a dog.

.....

2. Arctic fox hides in burrows at night.

.....

3. Acacia tree has sharp spines around its leaves.

.....

4. Exhausts of cars and factories cause breathing problems.

.....

2 (A) Choose the correct answer:

- Panther chameleon and can be found in the same habitat.

(a) brown bear (b) polar bear (c) caracal (d) fennec fox

(B) Mention one example for each of the following:

1. A non-flying bird.

.....

2. A reptile that lives in hot desert.

.....

3. A plant growing in a fresh water habitat.

.....

(C) What happens when:

- A panther chameleon stands on the leaves of a tree?

.....

.....

3 (A) Put (✓) or (X):

1. The food passes from the mouth to the stomach through a narrow tube known as the esophagus. ()
2. Desert plants are characterized by their big leaves. ()

(B) Write the scientific term:

1. They are air sacs surrounded by blood vessels in the respiratory system. (.....)
2. It is the change in the behaviors or acts of a living organism to help it survive. (.....)
3. It is the structural adaptation that fixes the kapok tree in the soggy soil and supports its trunk. (.....)

4 (A) Classify the following sentences into structural or behavioral adaptations:

1. The countershading in bull shark.

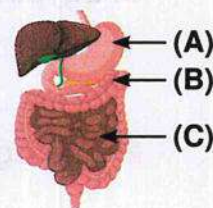
.....
.....

2. Acacia tree leaves produces poison.

.....
.....

(B) Look at the opposite figure, then complete the following sentences:

1. The part (A) mixes the food with and converts it into
2. The part (B) absorbs from the undigested food, while part (C) absorbs from the digested food.



(C) Give a reason for:

- Caracal has a tan-colored fur.

.....
.....

Revision on Concept 1.2

Senses at Work

1 Definitions

Nocturnal animals	They are animals that become active at night to search for food.
Echolocation	It is a property used by dolphins and bats to locate their prey in the dark.
Echo	It is the reflection of sound waves back from a solid surface.
Egyptian mongooses	They are animals that communicate by producing sounds that seem like chatter.
Dolphin	It is a fish that uses the echolocation property to hunt in the dark water.
Owl	It is a bird that has a bowl-shaped face with feathers.
Nervous system	- It is the system that allows us to sense our surrounding environment. - It is the system that keeps the living organisms safe away from danger.
Brain	- It is the main control center in the human body.
Spinal cord	It is a big nerve that passes through the backbone and is connected to the brain.
Nerves	- They are branches extended all over the body parts that carry messages. - They connect the components of the nervous system together.

Sensory receptors	They are nerves found in the sensory organs and receive information from the surrounding environment.
Jerboa	It is a desert rodent that has very large ears and long hind legs.
Reaction time	It is the time taken by a living organism to respond to danger.
Reflex actions	They are messages that are transmitted so fast that you are barely aware of them.
Humpback whales	They are living organisms that sing a wide range of musical tones underwater to communicate.
Ants	They communicate together using their sense of smell.
Nurse ants	They are ants that send smelly messages to scout ants when there is a lack of food.
Scout ants	They are ants that search for food and locate it.
Soldier ants	They are ants that protect the colony from any nearby danger.
A blind person's cane	It is a special device used by a blind person to locate things nearby.
Hearing sense	It is the sense used by bats to detect an echo.
Touch sense	It is the sense used by a blind person to detect an echo.
Smell sense	It is the sense used by ants to communicate.

2 Give a reason for:

- ① Some animals are adapted to be active at night.
 - Because in very hot places, some animals hunt at night when the weather is cooler.
 - Because some prey are available at night only.
 - Because they depend on the darkness to surprise their prey.
- ② The Egyptian mongoose makes sounds.
 - To communicate with other mongooses to move and search for food.
- ③  Owls can hunt during the night.
 - Because they have extraordinary hearing and sight senses.
- ④ Dogs are used in guarding.
 - Because they have sharp hearing and smell senses.
- ⑤ Dolphins can hear different types of sounds.
 - Because they have sharp hearing sense.
- ⑥  Dolphins use the echolocation property that depends on echo.
 - To locate their prey in the dark water.
- ⑦  Owls can rotate (turn) their heads in all directions.
 - To search for the prey everywhere.
- ⑧  Owls have bowl-shaped faces.
 - To direct sound them to the owl's ears.
- ⑨  Owls have large eyes.
 - To see the tiny and far-away movements of the prey.
- ⑩  The brain has an important function in the nervous system.
 - Because it is the main control center of the body that translates messages and gives the muscles the suitable response.
- ⑪ Nerves have an important function in the nervous system.
 - Because they carry messages through the human body.
- ⑫ The Egyptian jerboa can jump for long distances.
 - Because it has long hind legs.
- ⑬ There is hair on the Egyptian jerboa's feet and toes.
 - To help it grip the sand during jumping in zigzag paths.
- ⑭ The Egyptian jerboa has large and sensitive ears.
 - To hear the quiet noise of a snake.

⑮ **Humpback whales sing a range of tones and a series of songs underwater.**

- To communicate with each other in different seasons.

⑯ **The nurse ants send smelly messages to scout ants.**

- To alert the scout ants to search for food.

⑰ **The soldier ants use smells in their communication.**

- To communicate with the other ants if there is danger nearby.

⑱ **Special cane used by blind person changes echo into vibrations.**

- To help the blind person detect his surroundings using his sense of touch.

3 What happens if:

①  **Dolphins have a weak sense of hearing?**

- They cannot detect the echo reflected from their prey, so they will not be able to hunt in the dark water.

② **The sound waves produced by a dolphin hit an object underwater?**

- The sound waves will reflect back to the dolphin in the form of an echo, so the dolphin can detect the location of the object.

③  **Bats have a weak sense of hearing?**

- They cannot detect the echo reflected from their prey.

④ **Owls cannot turn their heads in all directions?**

- They cannot search for their prey everywhere.

⑤  **Your hand touches the spines of a cactus plant?**

- Your hand will move away quickly.

⑥ **The Egyptian jerboa hears a snake moving towards it?**

- It will hop in a zigzag path to escape quickly.

⑦ **The hearing sense of humpback whales becomes weak?**

- They cannot communicate with each other.

⑧ **The smell sense of ants becomes weak?**

- They cannot communicate with each other.

⑨  **The amount of food in the ant's colony becomes low (decreases)?**

- The nurse ants will send a smelly message to the scout ants to alert them.

⑩  **There is danger near the ant's colony?**

- The soldier ants will send smelly messages to alert the other ants.

⑪ **The high-pitched sound that is produced by the blind person's cane hits an object?**

- It reflects back to the cane in the form of an echo.

4 Summary

• Animals have sharper senses than humans to:

- ① Adapt to the environment.
- ② Search for food.
- ③ Protect themselves.
- ④ Communicate together.

Egyptian Mongooses

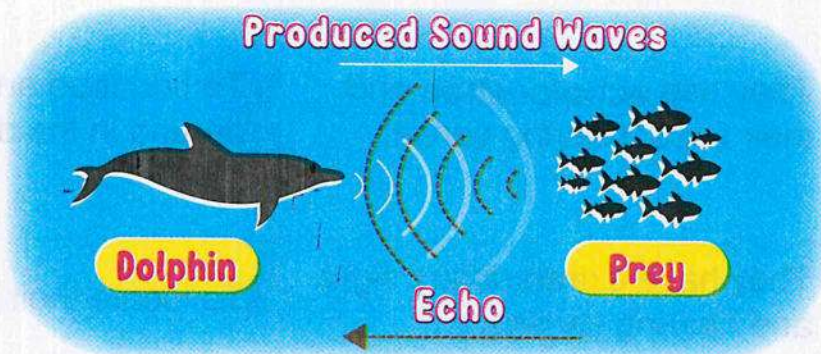
• Egyptian mongooses produce sounds that seem like chatter:

- ① To communicate together.
- ② To move and search for food.



Dolphins

- **Dolphins** use a **property** known as “**echolocation**” that depends on “**echo**” to locate their prey and objects in the dark water.



How does a dolphin locate objects in the dark water?

- ① A dolphin produces **sound waves** which travel in water.
- ② When these sound waves hit a solid object, they return back to the dolphin in the form of an **echo**.
- ③ The echo helps the dolphin locate the prey and other objects.

Nocturnal animals

They are animals that become active at night to search for food.

Why do some animals hunt at night?

- 1 In very hot places, some animals hunt at night when the weather is cooler.
- 2 Some animals depend on darkness to surprise their prey.
- 3 Some prey are available only at night.

Nocturnal Animal	Adaptation	Reason
1 Bats (Mammal) 	They use echolocation and their super hearing sense.	To find food and move around in the dark.
2 Owls (Birds) 	They have extraordinary sight and hearing senses.	To locate their prey.
	They can rotate their heads in all directions.	To search for their prey everywhere.
	They have bowl-shaped faces and feathers on their heads.	To direct sound into the owl's ears.
3 Jerboas (Desert rodents) 	They have large ears.	To help them hear the noise of nearby moving snakes.
	They have long hind legs.	To jump for long distances.
	Their feet and toes have hair.	To grip the sand when they jump in zigzag paths.

Nervous System

- Mammals, such as humans, elephants, and dogs have the **same** nervous system.

Structure of the Nervous system:

1 Brain

Function:

- It is the main control center of the body.

2 Spinal Cord

Function:

- It is a big nerve that runs through the backbone.
- It carries messages from the brain to the body parts and vice versa.

3 Nerves

Function:

- They are distributed throughout the body.
- They connect the sense organs with the brain.
- They carry messages from the brain to the spinal cord and body parts, and vice versa.

Importance of the Nervous system:

1

It gathers information through the sensory organs.

2

It interprets and processes the information.

3

It tells the body what to do.

How does the nervous system work?

- 1 **Sensory receptors** receive information from the environment.
- 2 **Nerves** carry a message from the sensory receptors to the brain.
- 3 **The brain** translates the message and tells the body what to do.

Reaction time

It is the time taken by an organism's body to respond to danger.

What happens if:

A girl touches the spine of a cactus plant?

She will move her hand away quickly.

A jerboa hears the noise of a snake?

It jumps in zigzag paths quickly to escape from the snake.

Reflexes

They are fast messages sent by the nervous system, and we are barely aware of them.

Examples:

- ① Blinking when a strange object gets closer to your eyes.
- ② Moving your hand away when you touch a spine of cactus.

① Humans Communication

- People first started sharing information using **written symbols**.
- Technology systems allow us to **call**, **text**, and send **emails** great distances.

② Ants Communication

- Ants live in **colonies** that contain thousands of individuals.
- Ants use **their sense of smell** to communicate.
- Groups of ants within a colony have **different roles**.



① Nurse Ants

Nurse ants send smelly messages to scout ants when there is a shortage (lack) of food.

② Scout Ants

- Scout ants search for food and locate it.
- Scout ants send a smelly message to alert the other ants where to find food.

③ Soldier Ants

Soldier ants use smelly messages to communicate if there is danger nearby.

3 Humpback Whales Communication

- They sing a wide range of **tones** and a series of **songs** to communicate with each other.
- The songs of humpback whales have **different sound pitches** depending on the **season**.



In Winter

- It is the **mating season**.
- Their songs have **high-pitched** sounds, which travel better in **cold** water.

In Summer

- It is the **feeding season**.
- Their songs have **low-pitched** sounds, which travel better in **warm** water.

NOTES:

- A man has a **rough** voice. (**Low**-pitched sounds)
- A woman has a **sharp** voice. (**High**-pitched sounds)



4 Bats

- Bats also use **sound** to **get information about their surroundings**.

How do bats locate objects in the dark?

- 1 A bat makes a high-pitched sound.
- 2 When the sound hits an insect, it reflects back in the form of an echo.
- 3 The bat listens for the echo and locates the insect nearby.



How does a blind person use the cane?

- 1 The special cane emits a high-pitched sound.
- 2 When the sound hits an object, it reflects as an echo.
- 3 **The special cane changes the echo into vibrations.**  To allow the blind person to detect the echo using their **thumb (touch sense)**, so they can know the directions of objects (obstacles) around them.



Concept 1.2



Q1. Choose the correct answer:

- 1 Dolphins depend on their sharp senses of to get food.

a. sight	b. taste
c. smell	d. hearing

(Damietta 2024)
- 2 When you determine a sweet or bitter taste, you have used your

a. tongue	b. eyes
c. ears	d. nose

(Cairo 2023/2022)
- 3 Your sensation of hot weather depends on the sensory receptors in your

a. eyes	b. skin
c. nose	d. ear
- 4 To detect the place of a table in a completely dark room, you can depend on your sense of

a. sight	b. touch
c. taste	d. hearing

(Qalyoubia 2023)
- 5 Which of the following organs work together to see different objects?

a. Nose and brain	b. Eyes and brain
c. Ears and brain	d. Tongue and brain

(Azhar – Giza 2023)
- 6 The mating season in which the humpback whales sing is the

a. autumn	b. summer
c. winter	d. spring

(Dakahlia 2023)
- 7 Humpback whales use singing for

a. heating	b. hiding from enemies.
c. communication	d. having fun with whales

(Dakahlia 2023)
- 8 An animal that has the ability to turn its head in all directions is the

a. snake	b. jerboa
c. dolphin	d. owl

(Red Sea 2024)

-

- 18 Sense organs collect information and send signals to the
for processing and understanding.
- a. nerves
b. lungs
c. brain
d. spinal cord (Port Said 2022)
- 19 Dolphins depend on their sharp sense of to get food.
- a. sight
b. taste
c. smell
d. hearing (Damietta 2024)
- 20 produce high-pitched sounds during winter.
- a. Owls
b. Humpback whales
c. Toads
d. Salamanders (Alex. 2023)

Q2. Put (✓) or (X):

- 1 The ear is the sense organ responsible for seeing objects. ()
(Cairo 2023)
- 2 A person can identify spoiled food by using their sense of touch. ()
(Gharbia 2022)
- 3 Dolphins have a much stronger sense of hearing than humans. ()
(Red Sea 2023)
- 4 Animals that are active during night are called nocturnal animals. ()
(Red Sea 2024)
- 5 Nocturnal animals become active in the morning to look for their food. ()
(Alex. 2023)
- 6 Animals that are active during the day are called nocturnal animals. ()
(Port Said 2023)
- 7 Bats use their sense of smell to avoid danger. ()
(Cairo 2024)
- 8 Echolocation is a type of communication between owls. ()
(Qalyoubia 2023)
- 9 Owls have both extraordinary sight and hearing. ()
(Suez 2023)
- 10 Bats use their sense of touch to avoid danger. ()
(Cairo 2023)
- 11 All nocturnal animals have excellent night vision. ()
(Giza 2023)

- 12 The echoes help dolphins determine the location of their prey. ()
(Dakahlia 2024)
- 13 A bat depends on its hearing sense to search for food. ()
(Alex. 2024)
- 14 Bats use their sense of smell to avoid danger. ()
(Cairo 2023)
- 15 Jerboas have large ears and long hind legs. ()
(Qalyoubia 2024)
- 16 The spinal cord is the main control center in the human body. ()
(Alex. 2024)
- 17 The brain is responsible for processing information. ()
(Cairo 2022)
- 18 The nerves transfer messages from the brain to all body parts and vice versa. ()
(Menoufia 2024)
- 19 Humpback whales sing during the winter months for mating. ()
(Azhar 2024)
- 20 Humpback whales can sing underwater. ()
(Qalyoubia 2023)
- 21 Humpback whales change their sound pitch according to the season. ()
(Giza 2023)
- 22 In winter, the songs of humpback whales have high-pitched sounds. ()
(Menoufia 2023)
- 23 Humpback whales produce low-pitched sounds during their mating season. ()
(Kafr El-Sheikh 2023)
- 24 Humpback whales produce more than one type of songs. ()
(Giza 2023)
- 25 Ants can know the sweet taste by their sense of smell. ()
(Cairo 2022)
- 26 Reflexes are fast messages that you are barely aware of them. ()
(Alex. 2023)
- 27 Scout ants are responsible for alarming the colony in danger. ()
(Qalyoubia 2023)

Q3. Write the scientific term:

- 1 It's the system that controls all body functions and nerves are part of it. (.....)
(Cairo 2022)
- 2 It's the sense used to differentiate between smooth and rough surfaces. (.....)
(Azhar 2023)
- 3 It's the sense organ that can detect light energy. (.....)
(Giza 2023)
- 4 Its a property by which a bat can locate its prey insects through the sound reflected from them. (.....)
(Port Said 2023)
- 5 It's an animal with a bowl-shaped face and large eyes. (.....)
(Giza 2022)
- 6 It's the time taken by an organism's body to respond to danger. (.....)
(Kafr El-Sheikh 2023)
- 7 It's the main control center of the human body. (.....)
(Fayoum 2023)
- 8 They're ants that send a smelly message to alert the other ants where to find the food. (.....)
(Alex. 2023)
- 9 They're ants that send a smelly message when there is a shortage of food. (.....)
(Alex. – East 2023)

Q4. Complete the following sentences:

- 1 The is the organ that sends information to the brain when you smell perfume. (Alex. 2024)
- 2 The skin is an important organ of the system. (Dakahlia 2023)
- 3 The organ that is responsible for sight is the (Red Sea 2023)

- 4 Dolphins use property to find their prey. (Alex. 2024)
- 5 Dolphins have a sharp sense of (Qalyoubia 2023)
- 6 An can turn its head in all directions. (Alex. 2024)
- 7 Owls can detect the place of their prey by using the their senses of and (Cairo 2023)
- 8 The winter months are considered the seasons for humpback whales. (Cairo 2023)
- 9 A group of ants sends to communicate with each other. (Cairo 2023)
- 10 The system which is responsible for reflexes is the system. (Assiut 2023)
- 11 The spinal cord belongs to the system. (Ismailia 2023)
- 12 The is the main control organ in the human body. (Sohag 2023)
- 13 The processes and interprets information. (Mansoura 2023)
- 14 The nervous system of mammals consists of the,, and (Damnhour 2023)
- 15 The eye sends messages to the through the nerves. (Dakahlia 2023)
- 16 sing underwater for communication. (Suez 2024)
- 17 The humpback whale produces low-pitched sounds during months. (Dakahlia 2023)
- 18 Humpback whales communicate with each other by their sense of, where they sing a wide range of and a series of (Assiut 2023)
- 19 When you touch a very hot object, your hand move away quickly; this action is known as (Giza 2022)

Q5. Cross out the odd word:

- 1 Taste – Smell – Hearing – Eyes (Alex. 2024)
- 2 Spinal cord – Lungs – Nerves – Brain (Giza 2022)

Q6. Give reasons for:

- 1 An Egyptian jerboa has long hind legs. (Ismailia 2023)
.....
- 2 An owl can hunt at night. (Assiut 2023)
.....
- 3 Bats can catch insects in the dark. (Sharkia 2023)
.....
- 4 Dogs are used in guarding. (Cairo 2023)
.....
- 5 Dolphins can hear all kinds of sounds. (Cairo 2023)
.....
- 6 Humpback whales sing different songs. (Cairo 2024)
.....

Q7. What happens if:

- 1 Your foot touches a nail on the ground? (Qalyoubia 2023)
.....
- 2 Bats cannot use the echolocation property? (Dakahlia 2023)
.....
- 3 Jerboas' legs are short? (Menoufia 2023)
.....
- 4 The amount of food in an ants colony decreases? (Cairo 2024)
.....
- 5 There is a danger near the ants colony? (Cairo 2024)
.....

Concept

1.2

Q1. Choose the correct answer:

- 1 Dolphins depend on their sharp senses of to get food.
a. sight
b. taste
c. smell
d. hearing (Damietta 2024)
- 2 When you determine a sweet or bitter taste, you have used your
a. tongue
b. eyes
c. ears
d. nose (Cairo 2023/2022)
- 3 Your sensation of hot weather depends on the sensory receptors in your
a. eyes
b. skin
c. nose
d. ear
- 4 To detect the place of a table in a completely dark room, you can depend on your sense of
a. sight
b. touch
c. taste
d. hearing (Qalyoubia 2023)
- 5 Which of the following organs work together to see different objects?
a. Nose and brain
b. Eyes and brain
c. Ears and brain
d. Tongue and brain (Azhar – Giza 2023)
- 6 The mating season in which the humpback whales sing is the
a. autumn
b. summer
c. winter
d. spring (Dakahlia 2023)
- 7 Humpback whales use singing for
a. heating
b. hiding from enemies.
c. communication
d. having fun with whales (Dakahlia 2023)
- 8 An animal that has the ability to turn its head in all directions is the
a. snake
b. jerboa
c. dolphin
d. owl (Red Sea 2024)

- 9 Owls have strong senses.
 a. sight and taste
 b. hearing and sight
 c. touch and smell
 d. sight and touch (Menoufia 2024)
- 10 A dolphin depends on to locate its prey and places underwater.
 a. its memory
 b. its sense of smell
 c. echolocation
 d. its sense of touch (Cairo 2022)
- 11 Animals that become active at night are called animals.
 a. diurnal
 b. nocturnal
 c. extinct
 d. endangered (Cairo 2023)
- 12 use echolocation by bouncing high-pitched sounds in the air.
 a. Dolphins
 b. Owls
 c. Whales
 d. Bats (Alex. 2023)
- 13 All the following are components of the nervous system, except the
 a. brain
 b. spinal cord
 c. nerves
 d. heart (Red Sea 2024)
- 14 The organ responsible for the sight sense is the
 a. ear
 b. eye
 c. nose
 d. tongue (Sohag 2024)
- 15 When exposed to danger, the system helps to recognize it and avoid it.
 a. circulatory
 b. digestive
 c. nervous
 d. respiratory (Dakahlia 2024)
- 16 The system responsible for moving your hand away from danger is the system.
 a. digestive
 b. respiratory
 c. nervous
 d. stomach (Cairo 2024)
- 17 What carries the message from your eyes to your brain when you see something?
 a. Nerves
 b. Muscles
 c. Veins
 d. Glands (Gharbia 2022)

- 18 Sense organs collect information and send signals to the
for processing and understanding.
- a. nerves
b. lungs
c. brain
d. spinal cord (Port Said 2022)
- 19 Dolphins depend on their sharp sense of to get food.
- a. sight
b. taste
c. smell
d. hearing (Damietta 2024)
- 20 produce high-pitched sounds during winter.
- a. Owls
b. Humpback whales
c. Toads
d. Salamanders (Alex. 2023)

Q2. Put (✓) or (X):

- 1 The ear is the sense organ responsible for seeing objects. (✗)
(Cairo 2023)
- 2 A person can identify spoiled food by using their sense of touch. (✗)
(Gharbia 2022)
- 3 Dolphins have a much stronger sense of hearing than humans. (✓)
(Red Sea 2023)
- 4 Animals that are active during night are called nocturnal animals. (✓)
(Red Sea 2024)
- 5 Nocturnal animals become active in the morning to look for their food. (✗)
(Alex. 2023)
- 6 Animals that are active during the day are called nocturnal animals. (✗)
(Port Said 2023)
- 7 Bats use their sense of smell to avoid danger. (✗)
(Cairo 2024)
- 8 Echolocation is a type of communication between owls. (✗)
(Qalyoubia 2023)
- 9 Owls have both extraordinary sight and hearing. (✓)
(Suez 2023)
- 10 Bats use their sense of touch to avoid danger. (✗)
(Cairo 2023)
- 11 All nocturnal animals have excellent night vision. (✗)
(Giza 2023)

- 12 The echoes help dolphins determine the location of their prey. (✓)
(Dakahlia 2024)
- 13 A bat depends on its hearing sense to search for food. (✓)
(Alex. 2024)
- 14 Bats use their sense of smell to avoid danger. (X)
(Cairo 2023)
- 15 Jerboas have large ears and long hind legs. (✓)
(Qalyoubia 2024)
- 16 The spinal cord is the main control center in the human body. (X)
(Alex. 2024)
- 17 The brain is responsible for processing information. (✓)
(Cairo 2022)
- 18 The nerves transfer messages from the brain to all body parts and vice versa. (✓)
(Menoufia 2024)
- 19 Humpback whales sing during the winter months for mating. (✓)
(Azhar 2024)
- 20 Humpback whales can sing underwater. (✓)
(Qalyoubia 2023)
- 21 Humpback whales change their sound pitch according to the season. (✓)
(Giza 2023)
- 22 In winter, the songs of humpback whales have high-pitched sounds. (✓)
(Menoufia 2023)
- 23 Humpback whales produce low-pitched sounds during their mating season. (X)
(Kafr El-Sheikh 2023)
- 24 Humpback whales produce more than one type of songs. (✓)
(Giza 2023)
- 25 Ants can know the sweet taste by their sense of smell. (X)
(Cairo 2022)
- 26 Reflexes are fast messages that you are barely aware of them. (✓)
(Alex. 2023)
- 27 Scout ants are responsible for alarming the colony in danger. (X)
(Qalyoubia 2023)

Q3. Write the scientific term:

- 1 It's the system that controls all body functions and nerves are part of it. (Nervous system)
(Cairo 2022)
- 2 It's the sense used to differentiate between smooth and rough surfaces. (Touch)
(Azhar 2023)
- 3 It's the sense organ that can detect light energy. (Eye)
(Giza 2023)
- 4 It's a property by which a bat can locate its prey insects through the sound reflected from them. (Echolocation)
(Port Said 2023)
- 5 It's an animal with a bowl-shaped face and large eyes. (Owl)
(Giza 2022)
- 6 It's the time taken by an organism's body to respond to danger. (Reaction time)
(Kafr El-Sheikh 2023)
- 7 It's the main control center of the human body. (Brain)
(Fayoum 2023)
- 8 They're ants that send a smelly message to alert the other ants where to find the food. (Soldier ants)
(Alex. 2023)
- 9 They're ants that send a smelly message when there is a shortage of food. (Nurse ants)
(Alex. – East 2023)

Q4. Complete the following sentences:

- 1 The nose is the organ that sends information to the brain when you smell perfume. (Alex. 2024)
- 2 The skin is an important organ of the nervous system. (Dakahlia 2023)
- 3 The organ that is responsible for sight is the eye. (Red Sea 2023)

- 4 Dolphins use echolocation property to find their prey. (Alex. 2024)
- 5 Dolphins have a sharp sense of hearing. (Qalyoubia 2023)
- 6 An owl can turn its head in all directions. (Alex. 2024)
- 7 Owls can detect the place of their prey by using the their senses of hearing and sight. (Cairo 2023)
- 8 The winter months are considered the mating seasons for humpback whales. (Cairo 2023)
- 9 A group of ants sends smelly messages to communicate with each other. (Cairo 2023)
- 10 The system which is responsible for reflexes is the nervous system. (Assiut 2023)
- 11 The spinal cord belongs to the nervous system. (Ismailia 2023)
- 12 The brain is the main control organ in the human body. (Sohag 2023)
- 13 The brain processes and interprets information. (Mansoura 2023)
- 14 The nervous system of mammals consists of the brain, nerves, and spinal cord. (Damnhour 2023)
- 15 The eye sends messages to the brain through the nerves. (Dakahlia 2023)
- 16 Humpback whales sing underwater for communication. (Suez 2024)
- 17 The humpback whale produces low-pitched sounds during summer months. (Dakahlia 2023)
- 18 Humpback whales communicate with each other by their sense of hearing, where they sing a wide range of tones and a series of songs. (Assiut 2023)
- 19 When you touch a very hot object, your hand move away quickly; this action is known as reflex action. (Giza 2022)

Q5. Cross out the odd word:

- 1 Taste – Smell – Hearing – Eyes (Alex. 2024)
- 2 Spinal cord – Lungs – Nerves – Brain (Giza 2022)

Q6. Give reasons for:

- 1 An Egyptian jerboa has long hind legs. (Ismailia 2023)
To jump for long distances.
- 2 An owl can hunt at night. (Assiut 2023)
Because it has extraordinary hearing and sight senses.
- 3 Bats can catch insects in the dark. (Sharkia 2023)
Because bats use echolocation to locate insects in the dark.
- 4 Dogs are used in guarding. (Cairo 2023)
Because they have sharp sight and smell senses.
- 5 Dolphins can hear all kinds of sounds. (Cairo 2023)
Because they have extraordinary sense of hearing.
- 6 Humpback whales sing different songs. (Cairo 2024)
To communicate with each other in different seasons.

Q7. What happens if:

- 1 Your foot touches a nail on the ground? (Qalyoubia 2023)
Your foot will move away quickly.
- 2 Bats cannot use the echolocation property? (Dakahlia 2023)
Bats can't find food, so they may die.
- 3 Jerboas' legs are short? (Menoufia 2023)
They can't jump for long distances.
- 4 The amount of food in an ants colony decreases? (Cairo 2024)
The nurse ants send smelly message to the scout ants to alert them to find food.
- 5 There is a danger near the ants colony? (Cairo 2024)
The soldier ants send a smelly message to alert the other ants of the danger nearby.

1 (A) Cross out the odd word:

- Brain – Spinal cord – Stomach – Nerves (.....)

(B) Write the scientific term:

1. It is the sense organ that is responsible for detecting different odors. (.....)
2. It is the main control center of the human's body. (.....)
3. It is the system that controls all the body's functions and nerves are one part of it. (.....)
4. It is the bird that can turn its head backwards and has a bowl-shaped face with large eyes. (.....)

2 (A) Choose the correct answer:

1. Feeling hot or cold depends on the sensory receptors in the
 (a) skin (b) eyes (c) ears (d) stomach
2. The time it takes for the body to react to different information (danger) is called the time.
 (a) absorption (b) digestion (c) reaction (d) respiration

(B) Give a reason for:

1. Egyptian mongooses make sounds.

.....

2. The Egyptian jerboa has long hind legs.

.....

3. Owls can turn their head in all directions.

.....

3 (A) Choose from column (A) what suits it in column (B):

Column (A)	Column (B)
1. Egyptian jerboas	Ⓐ use echolocation to locate their prey.
2. Humpback whales	Ⓑ are desert rodents with long hind legs.
	Ⓒ can sing underwater to communicate with each other.

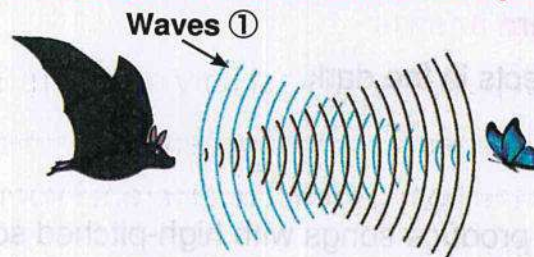
1. 2.

(B) What happens if:

- Your hand touches the thorns of a cactus plant?

.....

(C) Look at the following figure then answer the questions below:



1. What's the name of the property used by the bat in this figure?

.....

2. What's the name of the waves ①?

.....

4 (A) Put (✓) or (X):

- Ants can communicate with each other by singing. ()

(B) Complete the following sentences:

1. The sensory receptors in your identify the sour taste of a lemon.
2. Dogs are used in guarding because they have shape senses of and
3. All parts of the nervous system are connected together by
4. Spinal cord is a big nerve that runs through the

1 (A) Correct the underlined word:

- The skin is an important organ of the digestive system. (.....)

(B) Mention one function for each of the following:

1. The brain in the human body.

.....

2. The cane used by a blind person.

.....

(C) Give a reason for:

1. Bats can catch insects in the dark.

.....

2. Humpback whales produce songs with high-pitched sounds in winter.

.....

2 (A) Cross out the odd word:

- Taste – Smell – Hearing – Eyes (.....)

(B) Write the scientific term:

1. They are group of ants that are responsible for locating food. (.....)
2. They are animals that become active at night. (.....)

(C) What happens if:

1. The Egyptian jerboa hears a snake moving towards it?

.....

2. Owls have small eyes?

.....

3 (A) Choose the correct answer:

1. The sense of hearing of dolphins is that of humans.
(a) weaker than (b) sharper than (c) typical to (d) similar to
2. depend on the sharp sense of sight to locate its prey.
(a) Egyptian mongooses (b) Bats
(c) Owls (d) Dolphins

(B) Complete the following sentences:

1. Sense organs collect information from the surroundings and send it to the to be interpreted.
2. Nerves of the are connected directly to the brain.
3. The senses of and help foxes to avoid danger.

4 (A) Classify the following sentences into structural or behavioral adaptations:

1. Hopping of jerboa in zigzag patterns.

2. Owl can turn its head in all directions.

(B) Look at the following diagram then answer the following questions:



1. What do organ ② and organ ③ represent?
.....
.....
2. What are the type of nerves found in organ ① that receives the information from the surrounding?
.....
.....

1 (A) Cross out the odd word:

- Nose – Tongue – Skin – Smell

(.....)

(B) Give a reason for:

1. Owls can hunt at night.

.....

2. The Egyptian jerboa can jump for long distances.

.....

3. Animals that live in hot regions become active at night.

.....

4. Dolphins have super sense of hearing.

.....

2 (A) Choose the correct answer:

- The nervous system of consists of the brain, spinal cord and nerves, such as elephants and dogs.

(a) rodents

(b) birds

(c) mammals

(d) reptiles

(B) Mention one example for each of the following:

1. A flying mammal.

.....

2. A reflex action.

.....

(C) What happens if:

1. High-pitched sounds produced by a bat hit a mosquito?

.....

2. Humpback whales can't sing under water?

.....

3 (A) Put (✓) or (X):

1. The reflexes are fast messages; you are barely aware of them. ()
2. Both ants and acacia tree can send smelly messages. ()

(B) Write the scientific term:

1. It is the season in which humpback whales produce low-pitched sounds. (.....)
2. It is the sense organ used to identify different colors. (.....)
3. It is the bouncing of sound waves when they hit a solid object. (.....)

4 (A) Classify the following sentences into structural or behavioral adaptations:

1. Owls have large ears.

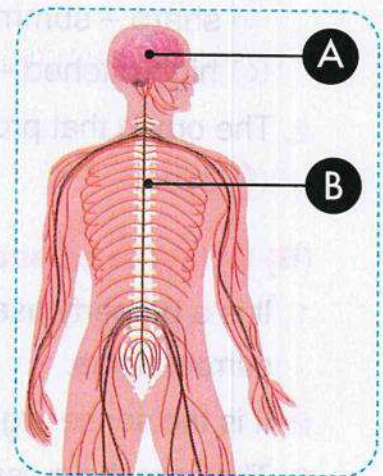
.....
.....

2. Bats become active at night.

.....
.....

(B) Look at the opposite figure, then complete the following sentences:

1. This figure represents the human system.
2. Part (A) represents the
3. The function of part (B) is
and it is located inside



1 (A) Cross out the odd word:

• Humpback whales – Jerboa – Ants – Bats

(.....)

(B) Give a reason for:

1. Humans can differentiate between different sounds.

.....

2. The soldier ants send smelly messages to other ants in the colony.

.....

3. Panther chameleon has sharp sense of taste and sight.

.....

4. Owls have a bowl-shaped face and feathers around its head.

.....

2 (A) Choose the correct answer:

1. Humpback whales produce sounds in months.

(a) sharp – summer

(b) low-pitched – winter

(c) high-pitched – summer

(d) sharp – winter

2. The organ that processes the information collected from the eyes is the

(a) eye

(b) spinal cord

(c) nerves

(d) brain

(B) Write the scientific term:

1. It is a property used in blind people canes to help them detect their surroundings. (.....)

2. It is the sense organ that can detect different sounds. (.....)

3. They are the messages sent by the nervous system so fast that you are barely aware of them. (.....)

3 (A) Put (✓) or (X):

- The spinal cord isn't connected to the brain.

()

(B) Complete the following sentences:

1. Humpback whales communicate with each other by their sense of , where they sing a wide range of notes and a series of
2. Owl has large , while jerboa has large
3. The system which is responsible for reflexes is the
4. When the is low in a colony, send smelly messages to scout ants.

4 (A) Choose from column (A) what suits it in column (B):

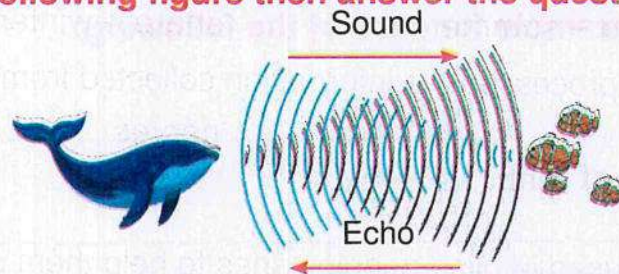
Column (A)	Column (B)
1. Egyptian mongooses	(a) use echolocation to locate their prey.
2. Dogs	(b) produce sounds like a chatter to communicate with each other.
	(c) use the senses of sight and smell to recognize friends.

1. 2.

(B) What happens if:

- Egyptian jerboa has short hind legs?

(C) Look at the following figure then answer the questions below:



1. What's the name of the property used by the dolphin in this figure?
.....
2. Mention the name of another animal that uses this property in air?
.....

حمل الآن

مجاناً وحصرياً

المراجعة رقم (3)

اختبار شهر اكتوبر



1 A) Complete the following sentence:

- The and bear can hide among trees in forests.

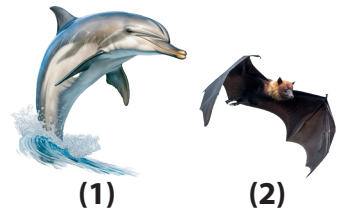
B) Answer the following questions:

1 Compare between structural and behavioral adaptation, in terms of their definition.

-
-

2 Look at the Opposite figure, then answer:

- The animal in Figure 1 relies on the property of to hunt its prey.
- Both animals rely on the sense of for communication.



3 The bull sharks have less competition for finding food in fresh water. Explain why?

-

2 A) Put (✓) or (X):

- The feet of the penguin do not freeze because they have a layer of fat. ()

B) Mention the importance or function of each of the following:

1 Esophagus

-

2 Spinal cord

-

3 A) Choose the correct answer:

- gather information from the environment.
 - Nerves
 - Brain
 - Sensory organs
 - Body parts

B) Give a reason for each of the following:

1 The presence of hair on the Egyptian jerboa's feet and toes.

-

2 The inhaled air differs from the exhaled air.

-

1 A) Choose the correct answer:

- The bodies of all the following are covered with fur, except
a) fennec foxes b) penguins c) polar bears d) brown bears

B) Give a reason for each of the following:

- 1 The Egyptian mongooses make sounds.
.....
- 2 The starred agama lizard always looks for shade areas in desert.
.....
- 3 Fennec fox has a tan-colored coat.
.....

2 A) Write the scientific term:

- An aquatic animal that can hide from its enemies through countershading.
(.....)

B) What happens if ...?

- 1 Bats lose their ability to hear.
.....
- 2 Panther chameleon is exposed to danger.
.....

3 A) Complete the following sentence:

- When snakes make a noise, the sensory receptors found in jerboa's ears send a warning message to the brain.

B) Define:

- 1 Echo
.....
- 2 Camouflage
.....

1 A) Cross out the odd word:

- Taproot roots – Long trunk – Tiny leaves – Produce poison

B) What is meant by ...?

- 1 System

•

- 2 Nocturnal animals

•

- 3 Reflexes

•

2 A) Correct the underlined word in the following sentence:

- The spinal cord runs through the mouth. (.....)

B) Answer the following questions:

- 1 The opposite animal depends on the sense of
to communicate with each other.

- 2 **Classify** the following into structural adaptation
or behavioral adaptation:

a) Living of the arctic fox in burrows.

(.....)

b) V-shaped of feet of panther chameleon.

(.....)



3 A) Complete the following sentence:

- has a triangular shape and short branches.

B) Explain:

- 1 The importance of juices of liver and pancreas.

•

- 2 The Egyptian jerboa can jump for long distances.

•

1 A) Write the scientific term:

- An animal that can turn its head backwards, and has a bowl-shaped face.

(.....)

B) Answer the following questions:

- 1 **Compare between** Acacia and kapok tree, in terms of the types of roots.

-
-

- 2 **Look at the following figure, then answer:**

a) The following organ belongs to system.

b) Write its function.



-

2 A) Put (✓) or (X):

- Scout ants are responsible for alarming colony in danger.

()

B) What happens if ...?

- 1 Small intestine doesn't make its function in the human body.

-

- 2 Jerboa hears a snake moves towards it.

-

3 A) Choose the correct answer:

- Digestion process begins in the with the help of saliva.

a) stomach b) mouth c) esophagus d) teeth

B) Give a reason for each of the following:

- 1 The songs of humpback whales have high-pitched sounds during winter months.

-

- 2 Diaphragm plays an important role in respiration process.

-

-

1 A) Choose the correct answer:

- Mangrove tree has long and strong roots that
 - a) resist the strong wind
 - b) resist the water waves
 - c) prevent the loss of water
 - d) absorb the underground water

B) Give a reason for each of the following:

- 1 Acacia tree has sharp spines around its leaves.
 -
- 2 The nurse ants send smelly messages to scout ants.
 -
- 3 Gills are very important organs for fish.
 -

2 A) Complete the following sentence:

- When the Egyptian jerboa is in danger, it starts to run away, this action occurs in a very short time called the

B) Mention the importance or function of each of the following:

- 1 Nerves
 -
- 2 Large intestine
 -

3 A) Put (✓) or (X):

- The blood vessels in a penguin's feet bring cold blood up. ()

B) What happens if ...?

- 1 The polar bear has thin fur instead of its thick fur.
 -
- 2 Your hand touches the spines of a barbary fig plant.
 -

1 A) Complete the following sentence:

- The **brown** and **black** bear can hide among trees in forests.

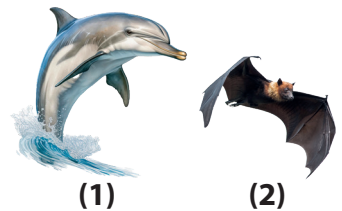
B) Answer the following questions:

- 1 **Compare between** structural and behavioral adaptation, in terms of their definition.

Structural adaptation	Behavioral adaptation
It is a change that happens in the structure of the organism's body.	It is a change that happens in the behavior of an organism.

- 2 **Look at the opposite figure, then answer:**

- a) The animal in Figure 1 relies on the property of **echolocation** to hunt its prey.
b) Both animals rely on the sense of **hearing** for communication.



- 3 The bull sharks have less competition for finding food in fresh water. **Explain why?**
• Because most sharks can only live in salt water.

2 A) Put (✓) or (X):

- The feet of the penguin do not freeze because they have a layer of fat.

(X)

B) Mention the importance or function of each of the following:

- 1 Esophagus

- It allows the food to move from throat down into the stomach.

- 2 Spinal cord

- It carries messages from the brain to the body parts and vice versa.

3 A) Choose the correct answer:

- gather information from the environment.

a) Nerves

b) Brain

c) Sensory organs

d) Body parts

B) Give a reason for each of the following:

- 1 The presence of hair on the Egyptian jerboa's feet and toes.

- To help it grip the sand when it jumps.

- 2 The inhaled air differs from the exhaled air.

- Because the inhaled air is rich in oxygen gas, while the exhaled air is rich in carbon dioxide gas.

1 A) Choose the correct answer:

- The bodies of all the following are covered with fur, except
a) fennec foxes b) penguins c) polar bears d) brown bears

B) Give a reason for each of the following:

- 1 The Egyptian mongooses make sounds.
 - To communicate with other mongooses to move from one place to another or when searching for food.
- 2 The starred agama lizard always looks for shade areas in desert.
 - To keep its body cool during hot sunny days.
- 3 Fennec fox has a tan-colored coat.
 - To hide in a sandy, rocky environment and to protect it from the hot Sun.

2 A) Write the scientific term:

- An aquatic animal that can hide from its enemies through countershading.
(Bull shark)

B) What happens if ...?

- 1 Bats lose their ability to hear.
 - They can't hunt at night.
- 2 Panther chameleon is exposed to danger.
 - It puffs up its body with air, opens its mouth wide, and changes the color of its scales.

3 A) Complete the following sentence:

- When snakes make a noise, the sensory receptors found in jerboa's ears send a warning message to the brain.

B) Define:

- 1 Echo
 - It is the bouncing back of sound waves when they hit a solid surface.
- 2 Camouflage
 - It is a way of adaptation that some animals use to hide from their predators or preys by blending in with the surrounding environment.

1 A) Cross out the odd word:

- Taproot roots – Long trunk – Tiny leaves – Produce poison

B) What is meant by ...?

1 System

- It is a group of organs that work together to perform a specific job.

2 Nocturnal animals

- They are animals that adapted to be active at night.

3 Reflexes

- They are messages sent by the nervous system and are often so fast that you can't realize them.

2 A) Correct the underlined word in the following sentence:

- The spinal cord runs through the mouth.

(backbone)

B) Answer the following questions:

- 1 The opposite animal depends on the sense of **smell** to communicate with each other.

- 2 **Classify** the following into structural adaptation or behavioral adaptation:

a) Living of the arctic fox in burrows.

(Behavioral adaptation)

b) V-shaped of feet of panther chameleon.

(Structural adaptation)



3 A) Complete the following sentence:

- The **pine tree** has a triangular shape and short branches.

B) Explain:

- 1 The importance of juices of liver and pancreas.

- They help in breaking down food into nutrients.

- 2 The Egyptian jerboa can jump for long distances.

- Because it has long hind legs.

1 A) Write the scientific term:

- An animal that can turn its head backwards, and has a bowl-shaped face.

(Owl)

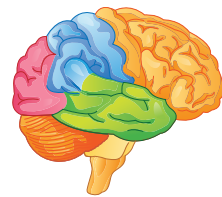
B) Answer the following questions:

- 1 Compare between Acacia and kapok tree, in terms of the types of roots.

Acacia tree	Kapok tree
A very long root called taproot that grows directly downward.	A large, wide root called buttress root.

- 2 Look at the following figure, then answer:

- a) The following organ belongs to **nervous** system.
b) Write its function.



- The main control center in the body.

2 A) Put (✓) or (X):

- Scout ants are responsible for alarming colony in danger.

(X)

B) What happens if ...?

- 1 Small intestine doesn't make its function in the human body.

- The body can't absorb nutrients or digested food.

- 2 Jerboa hears a snake moves towards it.

- It hops in zigzag patterns, so it can escape quickly from danger.

3 A) Choose the correct answer:

- Digestion process begins in the with the help of saliva.

- a) stomach b) mouth c) esophagus d) teeth

B) Give a reason for each of the following:

- 1 The songs of humpback whales have high-pitched sounds during winter months.

- Because the high-pitched sounds travel better through cold water.

- 2 Diaphragm plays an important role in respiration process.

- Because it contracts and moves downward during inhalation to increase the size of chest, while it relaxes and moves upward during exhalation to decrease the size of chest.

1 A) Choose the correct answer:

- Mangrove tree has long and strong roots that
 - a) resist the strong wind
 - b) resist the water waves
 - c) prevent the loss of water
 - d) absorb the underground water

B) Give a reason for each of the following:

- 1 Acacia tree has sharp spines around its leaves.
 - To prevent animals from eating its leaves.
- 2 The nurse ants send smelly messages to scout ants.
 - To alert the scout ants that the food is low in the colony.
- 3 Gills are very important organs for fish.
 - Because they enable fish to extract oxygen from water for respiration.

2 A) Complete the following sentence:

- When the Egyptian jerboa is in danger, it starts to run away, this action occurs in a very short time called the **reaction time**.

B) Mention the importance or function of each of the following:

- 1 Nerves
 - They carry messages from the brain to the spinal cord and other parts of the body and vice versa.
- 2 Large intestine
 - It absorbs the water from undigested materials.

3 A) Put (✓) or (X):

- The blood vessels in a penguin's feet bring cold blood up.

(✓)

B) What happens if ...?

- 1 The polar bear has thin fur instead of its thick fur.
 - It can't adapt with the very cold weather in polar regions.
- 2 Your hand touches the spines of a barbary fig plant.
 - My hand will move quickly away in less than one second.

حمل الآن

مجاناً وحصرياً

المراجعة رقم (4)

اختبار شهر اكتوبر



1. Choose the correct answer:

1. The starred agama keeps cool during a hot sunny day in desert by.

- a. eating green vegetables.
- c. drinking less water.
- b. drinking more water.
- d. finding a shaded area.

2. Adaptation helps the living organism in all the following, except.....

- a. surviving.
- b. reproduction.
- c. hiding.
- d. death.

3. Penguins live in a polar climate which.....

- a. is one of the hottest climates on Earth.
- b. is one of the coldest climates on Earth.
- c. looks like the rainy climate.
- d. looks like the forest climate.

4. Which of the following ways help penguins to adapt to live in polar climate?

- a. Their bodies are covered with skin.
- b. Their bodies are covered with dense feathers only.
- c. Their bodies are covered with a thick layer of fat only.
- d. Their bodies are covered with dense feathers and a thick layer of fat.

5. In penguin's feet,

- a. warm blood vessels weave around cold blood vessels.
- b. warm blood vessels weave around its toes.
- c. cold blood vessels weave around its toes.
- d. cold blood vessels weave around dense feathers.

6. Penguin's feet have blood vessels that bring up from its feet towards its body.
- a. cold water b. warm water
c. cold blood d. warm blood
-
7. The presence of a thick white fur is an adaptation in
- a. starred agama lizard. b. polar bear.
c. fennec fox. d. forest bear.
-
8. Bears that live in forests have fur.....that of polar bears.
- a. whiter than b. darker than
c. similar to d. brighter than
-
9. The color of fur of fennec fox protects it from
- a. wind. b. rains. c. hot climate. d. cold weather.
-
10. Fennec fox has a tan-colored coat that provides in its environment.
- a. camouflage b. respiration
c. panting d. communication
-
11. Panting in fennec fox belongs to adaptation.
- a. only structural b. only behavioral
c. both structural and behavioral
d. neither structural nor behavioral
-
12. Fennec fox and arctic fox live in burrows, this belongs to adaptation.
- a. only structural b. only behavioral
c. both structural and behavioral
d. neither structural nor behavioral
-
13. All of the following properties help fennec fox to stay cool, except
- a. thick fur coat. b. make panting.
c. tan-colored coat. d. extra-large ears.

14. Changing the color of body coat of arctic fox according to season, is considered as a type of

- a. behavioral adaptation.
- b. changing the way of breathing.
- c. structural adaptation.
- d. changing the way of drinking.

15. All of the following properties help arctic fox to stay warm, except

- a. thick fur coat.
- b. short ears.
- c. tan-colored coat.
- d. short legs.

16. Both fennec fox and arctic fox are similar in all of the following, except

- a. they live in the same habitat.
- b. they can eat different things.
- c. they have excellent hearing ability.
- d. they have different sized ears.

17. All of the following sentences represent the meaning of adaptation, except

- a. it is the characteristic that helps living things survive.
- b. it is the characteristic that helps living things reproduce.
- c. it is the change that helps the animal to find a prey.
- d. it is the change that causes the death of the animal.

18. From umbrella-shaped trees are

- a. mangrove tree and acacia tree.
- b. mangrove tree and kapok tree.
- c. acacia tree and kapok tree.
- d. barbery fig and water lily.

32. The acacia tree warns the other by sending nearby acacia trees from animals
- a. a watery message in the air.
 - b. a watery message in the water.
 - c. smelly message in the air.
 - d. a smelly message in the water.
-
33. When the nearby acacia trees receive the smelly message from another acacia tree, which exposed to be eaten by animals, they start to
- a. lose water from their trunks.
 - b. invite bats to eat their leaves.
 - c. make a poisonous substance in their leaves.
 - d. fall down their leaves.
-
34. Savannah is characterized by all of the following, except
- a. it is a grassland habitat.
 - b. it is rainy most of the year.
 - c. It has a mild temperature.
 - d. it has extreme lack of water.
-
35. Both of human and fish
- a. can breathe in air.
 - b. use oxygen gas to breathe in.
 - c. can breathe in water.
 - d. use carbon dioxide gas to breathe in.
-
36. Fish use to breathe in water.
- a. tail
 - b. eyes
 - c. lungs
 - d. gills
-
37. Gills differ from lungs, in that gills
- a. take in oxygen gas.
 - b. expel out carbon dioxide gas.
 - c. extract oxygen gas from water.
 - d. extract oxygen gas from air.
-

38. Gills in fish are considered as

- a. behavioral adaptation.
- b. structural adaptation.
- c. camouflage adaptation.
- d. behavioral and structural adaptations.

39. All of the following human activities can negatively affect the nature, except

- a. cutting down forests.
- b. removing air pollutants.
- c. farming and clearing lands.
- d. throwing wastes in waterways.

40. Human activities and bad habits can pollute of an ecosystem.

- a. air and soil only
- b. soil and waterways only
- c. air and waterways only
- d. air, soil and waterways

41. Pollution of an ecosystem can affect

- a. plants and animals only.
- b. animals and humans only.
- c. humans and plants only.
- d. plants, animals and humans.

42. If the environment is changed, plants to survive and grow.

- a. must have a taproot
- b. must have buttress roots
- c. must decrease their adaptation
- d. must land their seeds in another better place

43. From the negative effects of human activities on the human health are.....

- a. lung damage and asthma.
- b. wounds and asthma.
- c. heart problems and wounds.
- d. lung damage and wounds.

44. Sending smelly messages when there is a shortage of food is the role of
- a. queen ants. b. nurse ants.
c. scout ants. d. soldier ants.
-
45. Humpback whales sing during months, which is the mating season.
- a. winter b. summer c. spring d. autumn
-
46. Sense organs collect information and send signals to..... for processing and understanding.
- a. hands b. legs c. brain d. stomach
-
47.use echolocation by bouncing high-pitched sounds in the air.
- a. Bats b. Dolphins c. Whales d. Snakes.
-
48. Your sensation of hot weather depends on sensory receptors in the
- a. eyes. b. nose. c. ears. d. skin.
-
49. The nervous system gather information from the environment through then process them by and
- a. brain- nerves.
b. nerves - sensory organs.
c. sensory organs - brain.
d. spinal cord - brain.
-
50. You opened the door of your house when you heard the doorbell. Which of the following statements explains the sequence of messages inside your body in this situation?
- a. Ears → brain → hand. b. Ears → hand → brain.
c. Brain → ears → hand. d. Brain → hand → ears.

2. Complete the following sentences:

1. The penguin's body can keep warm through a thick layer of..... and dense.....
2. A penguin can stand around on ice all day due to the weaving of..... around each other in its feet.
3. Forest bears have or..... colored fur, while polar bears have..... colored fur.
4. In desert environment, animals like..... and..... Are covered with sandy-colored fur.
5. Among animals that can live in desert ecosystem are..... lizard and..... fox.
6. The fur of a polar bear is thick to keep its body..... in polar climate, while it has..... color to blend in with snow.
7. The body of some types of lizards are covered with.....to blend in with colored rocks in their environments.
8. Among animals that can live in polar environment are..... and
9. Animal can blend in with their surrounding environments to hide from their..... and preys through..... property.
10. Weaving of blood vessels around each other in penguin's feet is considered..... adaptation, while migration of birds to certain regions is considered..... adaptation.

11. Tan-colored coat in fennec fox is considered..... adaptation, while its panting to stay cool is considered..... adaptation.
12. Among animals that live in hot environments arefoxes, while..... foxes live in cold environments.
13. Extra-large ears allow heat to escape to cool the bodies offoxes, while short ears and legs help thefoxes stay warm.
14. Short ears of arctic fox is considered..... adaptation, while its staying in burrows to be warm is considered..... adaptation.
15. The process which the oxygen gas enter the lung is called.....
16. the bronchioles end with little air sac called.....
17. palm tree hasroot.
18. Barbary fig has.....leaves.
19. The pine tree has..... shape.
20. The way that bats depend on an adaptation to be able to see at night is called.....
21. The Egyptian mongoose make a..... to communicate with each other.
22. Dolphins use their sense to communicate with each other.
23. The sound produced by dolphins travels in water as a form of.....
24. The animals which active at night are called.....
25. Owls have both extraordinary of..... and

26. The nervous system consists of..... ,.....
,and.....
27. The brain is connected to a group of nerves that pass through the backbone called.....
28. Some nerves are connected directly to the brain, such as thenerves.
29. Nerves spread throughout the body connect the sense organs with.....
30. Groups of ants communicate with each other by.....sense.
31. The dog uses the senses of..... and..... in guarding.
32. Echo is the bouncing offwaves when they hit a solid surface.
33. An owl can see everywhere by tuning its..... in all directions, while a chameleon can see everywhere by moving its..... in opposite directions.
34. If you see a cat, you have received this information through the sensory receptors in your..... then the nerves send a signal to your..... to identify it.
35. The Egyptian jerboa has long..... has to help it jump for long distances, and it has..... on its feet and toes to help it catch sand when it jumps.
36. The spinal cord consists of many..... that pass through the..... human body.
37. When you touch a very hot object, your hand moves away quickly, this action is known as.....

38. Ants within a colony are divided into several groups such as..... ants and..... ants, where each group do a specific role.
39. Humpback whales communicate with each other by using the sense of..... , where they sing a wide range of..... and a series of.....
40. Ants are similar to the..... tree in that both of them send smelly messages for communication with other members of their species.
-

3. Put (v) or (X):

1. Living organisms can adapt their environmental conditions through structural adaptation and behavioral adaptation. ()
2. The behavioral adaptation is a change in the body structure of a living organism to survive. ()
3. When the snow melts in polar regions, the thick fur coat of arctic fox turns black. ()
4. The ears of arctic fox are larger than those of fennec fox ()
5. Fennec fox stays in burrows during day, while arctic fox stays in burrows at night. ()
6. Both fennec and arctic foxes can eat insects, fruit, plant roots and the remains from other animal's prey. ()
7. Fennec fox has sandy-colored fur to help it make camouflage. ()

8. Arctic fox lives in tundra, while fennec fox lives in hot desert. ()
9. Panting and staying in burrows are considered behavioral adaptations in fennec fox. ()
10. All types of sharks live in fresh water. ()
11. If a bull shark moves from a river to a sea, it will die. ()
12. Bull shark uses countershading camouflage to sneak up on its prey ()
13. Chameleon uses its tail and V-shaped feet to hunt and move ()
14. The panther chameleon has teeth and claws, through which it can hunt and eat its prey. ()
15. Starred agama lizard uses one of its eyes to search for food and, the other one to look out for danger. ()
16. Plants have structural adaptation only to help them survive and grow in different environments. ()
17. The rain doesn't fall for 6 months in Southern African Savannah. ()
18. The taproot of acacia tree grows deeply downward searching for water. ()
19. Acacia leaves are protected from being eaten by animals as they have brightly colored leaves. ()
20. Acacia tree and kapok tree use wind to send messages. ()

21. Acacia tree has delicious-smelling flowers to attract bats towards it. ()
22. Hand-shaped leaves of kapok tree is considered as a behavioral adaptation. ()
23. Blinking when something becomes near to your eyes is an example of reflexes. ()
24. The nerves of your fingers send signals to the brain to distinguish between smooth and rough objects. ()
25. Sensory organs are responsible for processing information. ()
26. It is impossible to design technology inspired by the adaptations of some living organisms around us. ()
27. A special cane is invented to help a person who has lost the sense of hearing. ()
28. Bats have the ability to change echo into vibrations just as the canes of blind persons do. ()
29. Animals communicate with each other by using different senses. ()
30. Humpback whales produce more than one type of songs. ()
31. The spinal cord is the main control center of the body, which helps carry messages from and to the brain. ()
32. The heart and eyes are connected to the brain through blood vessels that transmit information in the form of specific signals. ()

33. Animals that active during the daytime are called nocturnal animals. ()
34. The Egyptian jerboa has large ears which help in sensing the snakes. ()
35. The body senses and systems work separately when animals run away from their enemies ()
36. Some animals have abilities that humans do not have, and these abilities are called super sensory adaptations. ()
37. The Egyptian mongoose can communicate with its species by making sounds. ()
38. The sense of hearing of dolphins is stronger than that of human. ()
39. Skin helps human distinguish between the taste of different types of food through the sense of touch. ()
40. Foxes have sharp sense of taste to avoid dangers. ()

4. Write the scientific term of each of the following:

1. A change in the body structure of a living organism to survive. (.....)
2. A change in the behaviors or acts of a living organism to survive. (.....)
3. A type of foxes has a tan-colored fur. (.....)
4. A way by which fennec fox cools itself like dogs. (.....)
5. A type of foxes that changes its fur color between winter and summer seasons. (.....)

6. A lizard that has different bright colored scales to provide camouflage in its environment and has V-shaped feet.
(.....)
7. A shape of feet by which a panther chameleon holds tightly to branches of trees.
(.....)
8. A feature in the bull shark, in which the upper surface of its body is darker than its lower surface.
(.....)
9. Species that include frogs, toads and salamanders.
(.....)
10. The organ through which salamanders can take in oxygen gas directly from water.
(.....)
11. Species of living organisms that can live on land and in water.
(.....)
12. The type of adaptation that allows frog to take in oxygen gas from water directly through the skin.
(.....)
13. A respiratory organ that contains little air sacs, and found in humans and frogs but not in fish.
(.....)
14. A season in which the humpback whale produces high-pitched sound.
(.....)
15. Pitched sounds which travel through cold water better than through warm water.
(.....)
16. Pitched sounds which travel through warm water better than through cold water.
(.....)
17. A simple tool (device) used by blind people to walk safely.
(.....)
18. The organ responsible for processing information transmitted to it.
(.....)

19. Organs include the eyes, nose, ears, tongue and skin, and they receive information from the surroundings and send it to the brain. (.....)
20. A type of nerves in the sensory organs that is responsible for receiving information from the environment (.....)
21. The organ used to recognize different odors. (.....)
22. The sense used to differentiate between smooth and rough surfaces. (.....)
23. A system consisting of the brain, nerves, and spinal cord. (.....)
24. Messages that are so fast you are barely of them. (.....)
25. The time it takes an organism to react to danger. (.....)
26. "characteristics that help the living organisms to live and survive" (.....)
27. characteristics that help the living organisms to live and survive. (.....)
28. a way of adaptation that help the living organisms to hide from the predators or sneaking up on their prey. (.....)
29. penguin covered with a dense feather. (.....)
30. a change that happened the structure of the living organism to help it to survive (.....)
31. A tree whose leaves most animals cannot reach. (.....)
32. "a system whose organs break down food into smaller parts so the body can use them". (.....)
33. the system that supplies the body with oxygen gas and gets rid of carbon dioxide gas. (.....)
34. type of tree that grow in Amazon rain forest (.....)

35. a system that responsible for breaks down food and use it to get the body with nutrient. (.....)
36. The process of pulling air in and pushing air out of the body, (.....)
37. The process of breaks down food from complex. (.....)
38. A muscle that is very important in breathing. (.....)

5. Correct the underlined words:

1. Fish use gills to extract carbon dioxide gas from the water. (.....)
2. Air enters the mouth of a fish and then passes across the gills. (.....)
3. Blood vessels of lungs and gills are similar in carrying carbon dioxide gas to all the body parts. (.....)
4. Gills are unique behavioral adaptation that allow fish to breathe under water. (.....)
5. When an ecosystem is completely polluted, animals only are affected (.....)

6. Give reasons for:

1. The starred agama lizard always looking for shade areas in desert.
.....
2. The penguin's body has a thick layer of fat and dense feathers.
.....
3. The blood vessels in the penguin's feet weave around each other.
.....
4. Some desert lizards have colorful scales.
.....

5. Fennec fox has sandy-colored fur, while polar bear has a white fur.
.....
6. Some animals have the ability to make camouflage adaptation.
.....
7. Fennec fox has a tan-colored coat.
.....
8. Fennec fox pants like a dog.
.....
9. Arctic fox has a thick fur coat.
.....
10. The fur of arctic fox is white during winter but it turns brown in summer.
.....
11. To help it sneak up. on prey in any season..
.....
12. Burrows are excellent places for arctic and fennec foxes.
.....
13. Fennec fox has extra-large ears, while arctic fox has short ears.
.....
14. Bull sharks have less competition for finding food in fresh water.
.....
15. Panther chameleon has V-shaped feet and a long tail.
.....
16. Changing the color fur of arctic fox is considered as structural adaptation.
.....
17. The human body is made up of different systems.
.....

18. The importance of juices of liver and pancreas.
.....
19. Anus is an important organ in the digestive system.
.....
20. The inhaled air differs from the exhaled air.
.....
21. Diaphragm plays an important role in respiration process.
.....
22. The Egyptian jerboa has long hind legs.
.....
23. The brain has an important function in the nervous system.
.....
24. Animals that live in hot regions become active at night.
.....
25. Owls have bowl-shaped faces.
.....
26. Owl is a nocturnal animal.
.....
27. The Egyptian jerboa can jump for long distances.
.....
28. The presence of hair on the Egyptian jerboa's feet and toes.
.....
29. The Egyptian mongoose make sounds.
.....
30. Owls can hunt during the night.
.....
31. Dogs are used in guarding.
.....

32. Dolphins can hear all kinds of sound.

33. The fennec fox fur is brown.

34. fennec fox has a brown fur

35. fennec foxes have long ears

36. The acacia tree emits a bad smell.

37. Your body needs energy.

38. Respiration is very important for the living organism.

39. The animals cannot eat leaves of Acacia tree.

40. The diaphragm muscle is very important in breathing?

41. Saliva is very important in digestion process?

7. What happens if

1. The warm blood vessels and cold blood vessels in the penguin's feet do not weave around each other.

2. Pollution level increases in the natural habitat of amphibians.

3. The ecosystem of amphibians is containing clean air and water.
.....
4. Amphibians don't have lungs and breathe only through skin.
.....
5. The number of predators of amphibians increases.
.....
6. Salamanders have lungs only to respire.
.....
7. The amount of food in ants colony decreases.
.....
8. The spinal cord in the nervous system gut harmed
.....
9. Sensory receptors related to the eyes stopped sending messages to the brain.
.....
10. The sound waves produced by a dolphin when they hit an object under water.
.....
11. a fennec fox's ears are short.
.....
12. The panther chameleon has not v- shaped feel
.....
13. The living organisms cannot adapt to their environment.
.....
14. The arctic fox have no white dense fur.
.....
15. The kapok tree did not have buttress roots.
.....

16. humans didn't have a small intestine

.....

17. There is no alveoli in the respiratory system

.....

18. Saliva is not secreted in the mouth?

.....

19. There is no large intestine in the digestive system?

.....

8. Give only one example of behavioral adaptation in each of the following animals :

1. Fennec fox:.....

2. Starred agama lizard:.....

3. Bull shark:.....

4. Panther chameleon:.....

9. What is meant by (Define):

1. System:.....

2. Digestion process:.....

3. Respiration process:.....

4. Adaptations :.....

5. Camouflage:

10. Variant Questions

1. The camel is called the desert ship, think, why they called it by this name?

.....

.....

2. With your partner, identify one of the organisms that live in the desert environment.

.....

.....

3. Infer the characteristics that enable organisms to live in the desert environment

.....

.....

4. Identify: the types of adaptations in living organisms and give examples of each type?

.....

.....

5- Explain what is meant by countershading?

.....

.....

6. Discuss with your partner why Barbary fig have spines, and are there adaptations in plants like animals?

.....

.....

7. How can my tree survive? Way of plant adaptation

.....

.....

8- Mention the difference between structural and behavioral adaptations in plants.

.....

.....

9 - Compare between: inhalation and exhalation process.

.....

.....

10- Explain the role of the diaphragm muscles in the breathing process.

.....

.....

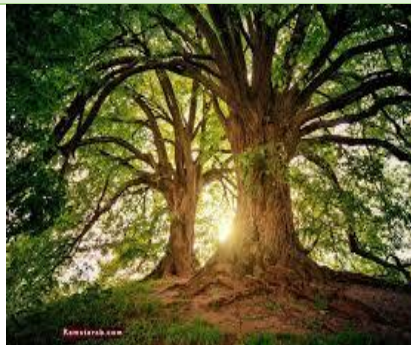
11. Notice the following pictures of the environment then record the name that describes them.



Which of the above living organisms can slide on the snow with bare feet?

.....

What are the characteristics that help it to adapt to its environment?



Observe the opposite image then answer:

- Name the living organism:

-lives in



Palm tree

Desert
environment
Structural
adaptation:



Pine tree

Snow
environment
Structural
adaptation:



Barbary lig

Desert
environment
Structural
adaptation:



Water lily

Wetland
environment
Structural
adaptation:



Mangrove tree

Salt
water
environment
Structural
adaptation:

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....



Behavioral adaptation	Structural adaptation	Behavioral adaptation	Structural adaptation
.....			
.....			
			

By using your textbook and the light of your study, write what the following refers to:



Behavioral adaptation	Structural adaptation	Behavioral adaptation	Structural adaptation
.....			
.....			
.....			
.....			
.....			

Behavioral Adaptation	
Structural Adaptation	

The organ (1) is

Its function is

The organ (2) is

Its function is

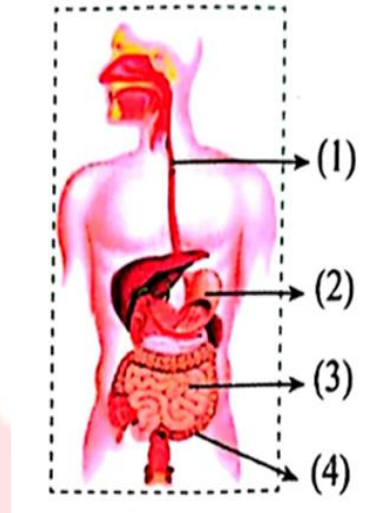
The organ (3) is

Its function is

The organ (4)

Its function is

Digestion process is:



(B) Look at the opposite figure that shows the structure of the human nervous system, then

answer the questions :

1. Which part spreads all around the human body?

.....

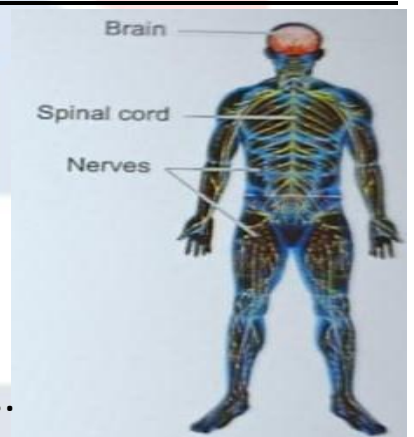
2. Which part is found inside the backbone of the human body ?

.....

3. Which part represents the main control center in the human body ?

.....

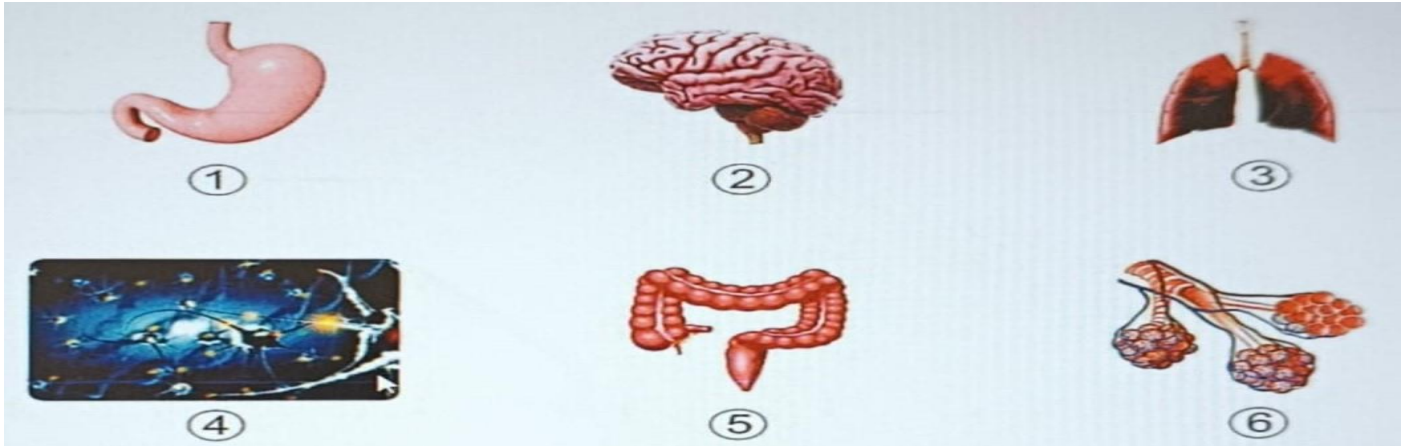
.....



مراجعات النخبة

You have some pictures of different parts of the human body. Write down the

organ number in front of the system to which it belongs in the following table :



System	Organ
1. Digestive system :	
2. Respiratory system :	
3. Nervous system :	

مراجعات النخبة

1. Choose the correct answer:

1. The starred agama keeps cool during a hot sunny day in desert by.

- a. eating green vegetables.
- c. drinking less water.
- b. drinking more water.
- d. finding a shaded area.

2. Adaptation helps the living organism in all the following, except.....

- a. surviving.
- b. reproduction.
- c. hiding.
- d. death.

3. Penguins live in a polar climate which.....

- a. is one of the hottest climates on Earth.
- b. is one of the coldest climates on Earth.
- c. looks like the rainy climate.
- d. looks like the forest climate.

4. Which of the following ways help penguins to adapt to live in polar climate?

- a. Their bodies are covered with skin.
- b. Their bodies are covered with dense feathers only.
- c. Their bodies are covered with a thick layer of fat only.
- d. Their bodies are covered with dense feathers and a thick layer of fat.

5. In penguin's feet,

- a. warm blood vessels weave around cold blood vessels.
- b. warm blood vessels weave around its toes.
- c. cold blood vessels weave around its toes.
- d. cold blood vessels weave around dense feathers.

6. Penguin's feet have blood vessels that bring up from its feet towards its body.
a. cold water b. warm water
c. cold blood d. warm blood
-
7. The presence of a thick white fur is an adaptation in
a. starred agama lizard. b. polar bear.
c. fennec fox. d. forest bear.
-
8. Bears that live in forests have fur.....that of polar bears.
a. whiter than b. darker than
c. similar to d. brighter than
-
9. The color of fur of fennec fox protects it from
a. wind. b. rains. c. hot climate. d. cold weather.
-
10. Fennec fox has a tan-colored coat that provides in its environment.
a. camouflage b. respiration
c. panting d. communication
-
11. Panting in fennec fox belongs to adaptation.
a. only structural b. only behavioral
c. both structural and behavioral
d. neither structural nor behavioral
-
12. Fennec fox and arctic fox live in burrows, this belongs to adaptation.
a. only structural b. only behavioral
c. both structural and behavioral
d. neither structural nor behavioral
-
13. All of the following properties help fennec fox to stay cool, except
a. thick fur coat. b. make panting.
c. tan-colored coat. d. extra-large ears.

14. Changing the color of body coat of arctic fox according to season, is considered as a type of

- a. behavioral adaptation.
- b. changing the way of breathing.
- c. structural adaptation.
- d. changing the way of drinking.

15. All of the following properties help arctic fox to stay warm, except

- a. thick fur coat.
- b. short ears.
- c. tan-colored coat.
- d. short legs.

16. Both fennec fox and arctic fox are similar in all of the following, except

- a. they live in the same habitat.
- b. they can eat different things.
- c. they have excellent hearing ability.
- d. they have different sized ears.

17. All of the following sentences represent the meaning of adaptation, except

- a. it is the characteristic that helps living things survive.
- b. it is the characteristic that helps living things reproduce.
- c. it is the change that helps the animal to find a prey.
- d. it is the change that causes the death of the animal.

18. From umbrella-shaped trees are

- a. mangrove tree and acacia tree.
- b. mangrove tree and kapok tree.
- c. acacia tree and kapok tree.
- d. barbery fig and water lily.

25. Desert plants are characterized by all of the following, except that they have

- a. small leaves.
- b. wide leaves.
- c. thick trunks.
- d. sharp spines.

26. Palm tree has tiny leaves like

- a. pine tree.
- b. kapok tree.
- c. acacia tree.
- d. water lily plant.

27. One of the structural adaptations of water lily plant is that it has

- a. long roots.
- b. needle leaves.
- c. tiny leaves.
- d. wide leaves.

28. it is difficult for rainforest plants to get

- a. water.
- b. air.
- c. sunlight.
- d. oxygen.

29. One of the behavioral adaptations of acacia tree is that.

- a. it has one very long root.
- b. It has sharp spines around its leaves.
- c. it has very tall trunk.
- d. it produces a poison to make bad tasty leaves.

30. Acacia tree trunk and camel hump,

- a. both store water.
- b. both store fat.
- c. the first stores fat and the second stores water.
- d. the first stores water and the second stores fat.

31. All of the following properties protect acacia leaves from being eaten by animals, except that

- a. they are high enough
- b. they are surrounded by sharp spines.
- c. they are brightly colored.
- d. they produce a poison.

32. The acacia tree warns the other by sending nearby acacia trees from animals
- a. a watery message in the air.
 - b. a watery message in the water.
 - c. smelly message in the air.
 - d. a smelly message in the water.
-
33. When the nearby acacia trees receive the smelly message from another acacia tree, which exposed to be eaten by animals, they start to
- a. lose water from their trunks.
 - b. invite bats to eat their leaves.
 - c. make a poisonous substance in their leaves.
 - d. fall down their leaves.
-
34. Savannah is characterized by all of the following, except
- a. it is a grassland habitat.
 - b. it is rainy most of the year.
 - c. It has a mild temperature.
 - d. it has extreme lack of water.
-
35. Both of human and fish
- a. can breathe in air.
 - b. use oxygen gas to breathe in.
 - c. can breathe in water.
 - d. use carbon dioxide gas to breathe in.
-
36. Fish use to breathe in water.
- a. tail
 - b. eyes
 - c. lungs
 - d. gills
-
37. Gills differ from lungs, in that gills
- a. take in oxygen gas.
 - b. expel out carbon dioxide gas.
 - c. extract oxygen gas from water.
 - d. extract oxygen gas from air.

38. Gills in fish are considered as

- a. behavioral adaptation.
 - b. structural adaptation.
 - c. camouflage adaptation.
 - d. behavioral and structural adaptations.
-

39. All of the following human activities can negatively affect the nature, except

- a. cutting down forests.
 - b. removing air pollutants.
 - c. farming and clearing lands.
 - d. throwing wastes in waterways.
-

40. Human activities and bad habits can pollute of an ecosystem.

- a. air and soil only
 - b. soil and waterways only
 - c. air and waterways only
 - d. air, soil and waterways
-

41. Pollution of an ecosystem can affect

- a. plants and animals only.
 - b. animals and humans only.
 - c. humans and plants only.
 - d. plants, animals and humans.
-

42. If the environment is changed, plants to survive and grow.

- a. must have a taproot
 - b. must have buttress roots
 - c. must decrease their adaptation
 - d. must land their seeds in another better place
-

43. From the negative effects of human activities on the human health are.....

- a. lung damage and asthma.
 - b. wounds and asthma.
 - c. heart problems and wounds.
 - d. lung damage and wounds.
-

44. Sending smelly messages when there is a shortage of food is the role of

- a. queen ants.
 - b. nurse ants.
 - c. scout ants.
 - d. soldier ants.
-

45. Humpback whales sing during months, which is the mating season.

- a. winter
 - b. summer
 - c. spring
 - d. autumn
-

46. Sense organs collect information and send signals to..... for processing and understanding.

- a. hands
 - b. legs
 - c. brain
 - d. stomach
-

47.use echolocation by bouncing high-pitched 8. sounds in the air.

- a. Bats
 - b. Dolphins
 - c. Whales
 - d. Snakes.
-

48. Your sensation of hot weather depends on sensory receptors in the

- a. eyes. b. nose. c. ears. d. skin.
-

49. The nervous system gather information from the environment through then process them by and

- a. brain- nerves. b. nerves - sensory organs.
c. sensory organs - brain. d. spinal cord - brain.
-

50. You opened the door of your house when you heard the doorbell. Which of the following statements explains the sequence of messages inside your body in this situation?

- a. Ears → brain → hand. b. Ears → hand → brain.
c. Brain → ears → hand. d. Brain → hand → ears.
-

51. The senses you depend on to find a small radio that produces low sound in a dark room are

- a. hearing and smell. b. touch and taste.
c. smell and taste. d. hearing and touch.
-

52. When snakes make a noise, the sensory receptors found in jerboa's..... send a warning message to the brain.

- a. ears b. nose c. feet d. teeth
-

53. The nervous system of mammals consists of

- a. the brain only. b. the spinal cord only.
c. nerves and the spinal cord only.
d. the brain, the spinal cord and nerves.
-

54. When your hand touches the spines of a cactus plant, it is withdrawn in
- a. less than one second. b. one minute.
c. two minutes. d. one hour.
-
55. To know if a cup of water is hot or cold, we need to use the sense of
- a. sight. b. hearing. c. smell. d. touch.
-
56. The sharp senses of a dolphin help it do all of the following, except.
- a. surviving. b. finding food.
c. finding water. d. protecting itself under water.
-

2. Complete the following sentences:

1. The penguin's body can keep warm through a thick layer of **fat** and dense **feathers**
2. A penguin can stand around on ice all day due to the weaving of **blood vessels** around each other in its feet.
3. Forest bears have **black** or **brown** colored fur, while polar bears have **white** colored fur.
4. In desert environment, animals like **fennec fox** and **caracal** Are covered with sandy-colored fur.
5. Among animals that can live in desert ecosystem are **starred agama** lizard and **fennec** fox.

6. The fur of a polar bear is thick to keep its body **Warm** in polar climate, while it has **white** color to blend in with snow.
7. The body of some types of lizards are covered with **colored scales** to blend in with colored rocks in their environments.
8. Among animals that can live in polar environment are **Penguin** and **polar bear**.
9. Animal can blend in with their surrounding environments to hide from their **predators** and preys through **camouflage** property.
10. Weaving of blood vessels around each other in penguin's feet is considered **Structural** adaptation, while migration of birds to certain regions is considered **Behavioral** adaptation.
11. Tan-colored coat in fennec fox is considered **Structural** adaptation, while its panting to stay cool is considered **Behavioral** adaptation.
12. Among animals that live in hot environments are **Fennec** foxes, while **Arctic** foxes live in cold environments.
13. Extra-large ears allow heat to escape to cool the bodies of **Fennec** foxes, while short ears and legs help the **Arctic** foxes stay warm.
14. Short ears of arctic fox is considered **Structural** adaptation, while its staying in burrows to be warm is considered **Behavioral** adaptation.
15. The process which the oxygen gas enter the lung is called **inhalation**.
16. the bronchioles end with little air sac called **alveoli**.

17. palm tree has **long** root.
18. Barbary fig has **sharp spines** leaves.
19. The pine tree has **triangular** shape.
20. The way that bats depend on an adaptation to be able to see at night is called **echolocation**.
21. The Egyptian mongoose make a **sounds** to communicate with each other.
22. Dolphins use their **hearing** sense to communicate with each other.
23. The sound produced by dolphins travels in water as a form of **sound waves**.
24. The animals which active at night are called **nocturnal animals**.
25. Owls have both extraordinary of **hearing and sight**.
26. The nervous system consists of **brain, spinal cord, ,and nerves**.
27. The brain is connected to a group of nerves that pass through the backbone called **spinal cord**.
28. Some nerves are connected directly to the brain, such as the **eyes** nerves.
29. Nerves spread throughout the body connect the sense organs with **brain**.
30. Groups of ants communicate with each other by **smell** sense.
31. The dog uses the senses of **hearing** and **smell** in guarding.
32. Echo is the bouncing off **sound** waves when they hit a solid surface.
33. An owl can see everywhere by turning its **head** in all directions, while a chameleon can see everywhere by moving its **eyes** in opposite directions.
34. If you see a cat, you have received this information through the sensory receptors in your **eyes** then the nerves send a signal to your **brain** to identify it.

35. The Egyptian jerboa has long **legs** to help it jump for long distances, and it has **hair** on its feet and toes to help it catch sand when it jumps.
36. The spinal cord consists of many **nervous** that pass through the **backbone** human body.
37. When you touch a very hot object, your hand moves away quickly, this action is known as **reflexe**
38. Ants within a colony are divided into several groups such as **nurse** ants, **scout**, ants and **soldier** ants, where each group do a specific role.
39. Humpback whales communicate with each other by using the sense of **hearing**, where they sing a wide range of **notes** and a series of, **songs**
40. Ants are similar to the **acacia** tree in that both of them send smelly messages for communication with other members of their species.

3.Put (v) or (X):

1. Living organisms can adapt their environmental conditions through structural adaptation and behavioral adaptation. (✓)
2. The behavioral adaptation is a change in the body structure of a living organism to survive. (X)
3. When the snow melts in polar regions, the thick fur coat of arctic fox turns black. (X)
4. The ears of arctic fox are larger than those of fennec fox (X)
5. Fennec fox stays in burrows during day, while arctic fox stays in burrows at night. (✓)
6. Both fennec and arctic foxes can eat insects, fruit, plant roots and the remains from other animal's prey. (✓)

7. Fennec fox has sandy-colored fur to help it make camouflage. (✓)
8. Arctic fox lives in tundra, while fennec fox lives in hot desert. (✓)
9. Panting and staying in burrows are considered behavioral adaptations in fennec fox. (✓)
10. All types of sharks live in fresh water. (✗)
11. If a bull shark moves from a river to a sea, it will die. (✗)
12. Bull shark uses countershading camouflage to sneak up on its prey (✓)
13. Chameleon uses its tail and V-shaped feet to hunt and move (✓)
14. The panther chameleon has teeth and claws, through which it can hunt and eat its prey. (✗)
15. Starred agama lizard uses one of its eyes to search for food and, the other one to look out for danger. (✗)
16. Plants have structural adaptation only to help them survive and grow in different environments. (✗)
17. The rain doesn't fall for 6 months in Southern African Savannah. (✓)
18. The taproot of acacia tree grows deeply downward searching for water. (✓)
19. Acacia leaves are protected from being eaten by animals as they have brightly colored leaves. (✗)

20. Acacia tree and kapok tree use wind to send messages. (✓)
21. Acacia tree has delicious-smelling flowers to attract bats towards it. (X)
22. Hand-shaped leaves of kapok tree is considered as a behavioral adaptation. (X)
23. Blinking when something becomes near to your eyes is an example of reflexes. (✓)
24. The nerves of your fingers send signals to the brain to distinguish between smooth and rough objects. (✓)
25. Sensory organs are responsible for processing information. (X)
26. It is impossible to design technology inspired by the adaptations of some living organisms around us. (X)
27. A special cane is invented to help a person who has lost the sense of hearing. (X)
28. Bats have the ability to change echo into vibrations just as the canes of blind persons do. (X)
29. Animals communicate with each other by using different senses. (✓)
30. Humpback whales produce more than one type of songs. (✓)
31. The spinal cord is the main control center of the body, which helps carry messages from and to the brain. (X)

32. The heart and eyes are connected to the brain through blood vessels that transmit information in the form of specific signals. (X)
33. Animals that active during the daytime are called nocturnal animals. (✓)
34. The Egyptian jerboa has large ears which help in sensing the snakes. (✓)
35. The body senses and systems work separately when animals run away from their enemies (X)
36. Some animals have abilities that humans do not have, and these abilities are called super sensory adaptations. (✓)
37. The Egyptian mongoose can communicate with its species by making sounds. (✓)
38. The sense of hearing of dolphins is stronger than that of human. (✓)
39. Skin helps human distinguish between the taste of different types of food through the sense of touch. (X)
40. Foxes have sharp sense of taste to avoid dangers. (X)

4. Write the scientific term of each of the following:

1. A change in the body structure of a living organism to survive. (Structural adaptation.)
2. A change in the behaviors or acts of a living organism to survive. (Behavioral adaptati)
3. A type of foxes has a tan-colored fur. (Fennec fox.)
4. A way by which fennec fox cools itself like dogs. (Panting.)

5. A type of foxes that changes its fur color between winter and summer seasons. (Arctic fox.)
6. A lizard that has different bright colored scales to provide camouflage in its environment and has V-shaped feet. (Panther chameleon.)
7. A shape of feet by which a panther chameleon holds tightly to branches of trees. (V-shaped feet.)
8. A feature in the bull shark, in which the upper surface of its body is darker than its lower surface. (Countershading.)
9. Species that include frogs, toads and salamanders. (Amphibians)
10. The organ through which salamanders can take in oxygen gas directly from water. (skin)
11. Species of living organisms that can live on land and in water. (Amphibians)
12. The type of adaptation that allows frog to take in oxygen gas from water directly through the skin. (structural adaptation)
13. A respiratory organ that contains little air sacs, and found in humans and frogs but not in fish. (lungs)
14. A season in which the humpback whale produces high-pitched sound. (Winter)
15. Pitched sounds which travel through cold water better than through warm water. (high-pitched sounds)
16. Pitched sounds which travel through warm water better than through cold water. (low-pitched sounds)
17. A simple tool (device) used by blind people to walk safely. (special Cane of blinds)

18. The organ responsible for processing information transmitted to it.
(brain)
19. Organs include the eyes, nose, ears, tongue and skin, and they receive information from the surroundings and send it to the brain.
(sensory organs)
20. A type of nerves in the sensory organs that is responsible for receiving information from the environment
(sensory receptors)
21. The organ used to recognize different odors.
(nose)
22. The sense used to differentiate between smooth and rough surfaces.
(touch)
23. A system consisting of the brain, nerves, and spinal cord.
(nervous system)
24. Messages that are so fast you are barely of them.
(reflexe messages)
25. The time it takes an organism to react to danger. (reaction time)
26. "characteristics that help the living organisms to live and survive"
(Adaptation)
27. a way of adaptation that help the living organisms to hide from the predators or sneaking up on their prey.
(Camouflage)
28. a change that happened the structure of the living organism to help it to survive
(Structural adaptation)
29. A tree whose leaves most animals cannot reach. (Acacia Tree)
30. "a system whose organs break down food into smaller parts so the body can use them".
(Digestive system)
31. the system that supplies the body with oxygen gas and gets rid of carbon dioxide gas.
(Respiratory system)
32. type of tree that grow in Amazon rain forest
(Kapok Tree)

33. a system that responsible for breaks down food and use it to get the body with nutrient. (Digestive system)
34. The process of pulling air in and pushing air out of the body, (respiration process)
35. The process of breaks down food from complex. (Digestion Process)
36. A muscle that is very important in breathing. (Diaphragm)

5. Correct the underlined words:

1. Fish use gills to extract carbon dioxide gas from the water. (oxygen gas)
2. Air enters the mouth of a fish and then passes across the gills. (water)
3. Blood vessels of lungs and gills are similar in carrying carbon dioxide gas to all the body parts. (oxygen gas)
4. Gills are unique behavioral adaptation that allow fish to breathe under water. (structural adaptation)
5. When an ecosystem is completely polluted, animals only are affected (animals , humans and plants)

6. Give reasons for:

1. The starred agama lizard always looking for shade areas in desert. To keep its body cool.
2. The penguin's body has a thick layer of fat and dense feathers. to keep its body warm
3. The blood vessels in the penguin's feet weave around each other. Weav around the cold blood vessels and heats it up

4. Some desert lizards have colorful scales.
to hide among the colorful rocks in the desert
-
5. Fennec fox has sandy-colored fur, while polar bear has a white fur.
The fennec fox has sandy-colored fur to blend in with desert landscapes,
while the polar bear has white fur to blend in with snow in the polar region.
-
6. Some animals have the ability to make camouflage adaptation.
Because camouflage helps some animals hide from their predators or prey in different environments
-
7. Fennec fox has a tan-colored coat.
To hide in a sandy, rocky environment and protect it from the hot sun.
-
8. Fennec fox pants like a dog.
To cool its body.
-
9. Arctic fox has a thick fur coat.
To keep its body warm in extreme cold climates.
-
10. The fur of arctic fox is white during winter but it turns brown in summer.
To help it sneak up on prey in any season.
-
11. Burrows are excellent places for arctic and fennec foxes.
Because burrows help: Fennec fox to stay cool during the sunny day
And helps Arctic fox to stay warm at night
-
12. Fennec fox has extra-large ears, while arctic fox has short ears.
Because extra-large ears help the fennec fox lose heat to cool its body,
while short ears help the arctic fox stay warm.
-
13. Bull sharks have less competition for finding food in fresh water.
Because other types of sharks live only in salt water.
-

14. Panther chameleon has V-shaped feet and a long tail.

To hold tightly with the branches of trees.

15. Changing the color fur of arctic fox is considered as structural adaptation.

Because it is a change in the body structure of a living organism to help it survive.

16. The human body is made up of different systems.

To perform different functions.

17. The importance of juices of liver and pancreas.

Because they help break down food into nutrients inside the small intestine.

18. Anus is an important organ in the digestive system.

Because solid waste materials leave the body through it.

19. The inhaled air differs from the exhaled air.

Because the inhaled air is rich in oxygen gas, while the exhaled air is rich in carbon

20. Diaphragm plays an important role in respiration process.

Because it contracts and moves downward during inhalation to increase the size of the chest, while it relaxes and moves upward during exhalation to decrease

21. The Egyptian jerboa has long hind legs.

To can run away for long distance from snake in zigzag pattern

22. The brain has an important function in the nervous system.

Because it is the main control system which translate these informations

23. Animals that live in hot regions become active at night.
because their preys May ba available at night and due to the hot temperature

24. Owls have bowl-shaped faces.
to collect sounds toward it's ears directly

25. Owl is a nocturnal animal.
because it is active at night

26. The Egyptian jerboa can jump for long distances.
due to it's long hind legs

27. The presence of hair on the Egyptian jerboa's feet and toes.
to catch the Sand during running

28. The Egyptian mongoose make sounds.
to communicate with the other mongooses

29. Owls can hunt during the night.
because it has extraordinary senses of sight and hearing

30. Dogs are used in guarding.
because it has Sharp senses of smell and hearing

31. Dolphins can hear all kinds of sound.
because it has Sharp sense of hearing

32. The fennec fox fur is brown.
to hide from prey or Predator

33. fennec foxes have long ears
To loss heat and keep its body cool

34. The acacia tree emits a bad smell.
To warn other trees

35. Your body needs energy.
To work and survive

36. Respiration is very important for the living organism.

To grow and survive.

37. The animals cannot eat leaves of Acacia tree.

Because it has sharp spines and bad taste

38. The diaphragm muscle is very important in breathing?

Because it has Sharp spines and produce poison which makes it's taste bad.

39. Saliva is very important in digestion process?

Because it soften the food.

7. What happens if

1. The warm blood vessels and cold blood vessels in the penguin's feet do not weave around each other.

The blood moving up into the penguin's body will be cold, which may make it freeze.

2. Pollution level increases in the natural habitat of amphibians.

The number of amphibians will decrease.

3. The ecosystem of amphibians is containing clean air and water.

Amphibians will survive and their numbers increase.

4. Amphibians don't have lungs and breathe only through skin.

They can survive only in water.

5. The number of predators of amphibians increases.

The number of amphibians will decrease.

6. Salamanders have lungs only to respire.

Salamanders can live only on land

7. The amount of food in ants colony decreases.

the nurse ants send a smelly message to scout ants to find food

8. The spinal cord in the nervous system got harmed
the messages won't be send from the body to the brain and vice versa
9. Sensory receptors related to the eyes stopped sending messages to the brain.
the eyes can't determine what it sees
10. The sound waves produced by a dolphin when they hit an object under water.
It will be bounced in the form of echo to help the dolphin to find the location
11. A fennec fox's ears are short.
it can't loss heat and can't keep it's body cool
12. The panther chameleon has not v- shaped feel
it can't hold tightly branches of tree
13. The living organisms cannot adapt to their environment.
They can't survive, so they will die
14. The arctic fox have no white dense fur.
can't blend in with snow and can't keep its body warm
15. The kapok tree did not have buttress roots.
It can't stand in the soggy soggy soil
16. humans didn't have a small intestine
It can't absorb nutrients and complete the digestion process
17. There is no alveoli in the respiratory system
Blood can't take Oxygen and get rid of carbon dioxide
18. Saliva is not secreted in the mouth?
The food will not be softened

19. There is no large intestine in the digestive system?
the water from the undigested food wouldn't be absorbed and it wouldn't leave the body
-

8. Give only one example of behavioral adaptation in each of the following animals :

1. Fennec fox : It pants like dogs to cool its body
 2. Starred agama lizard: It searches for a shaded area during a hot sunny day to cool its body
 3. Bull shark: It hunts during the day and at night, so it can surprise its prey.
 4. Panther chameleon : It puffs up its body with air during danger.
-

9. What is meant by (Define):

1. System: It is a group of organs that work together to perform a specific job
 2. Digestion process: .It is a process of breaking down food into smaller parts so the body can use them to get energy and grow.
 3. Respiration process: is a process of pulling air in and pushing air out
 4. Adaptations : They are characteristics that help living organisms survive and reproduce
 5. Camouflage: A type of adaptation which helps the living organisms to blend in with the environment
-

10. Variant Questions

1. The camel is called the desert ship, think, why they called it by this name?
Because the camel can store food and water
-

2. With your partner, identify one of the organisms that live in the desert environment.

Lizards

3. Infer the characteristics that enable organisms to live in the desert environment

Sandy colored - hide in shaded areas- storing food

4. Identify: the types of adaptations in living organisms and give examples of each type?

structure adaptation: blood vessels in penguin feet structure adaptation

behavioral adaptation: Migration of birds from one place to another

- 5- Explain what is meant by countershading?

Type of Camouflage that bull shark have it as it has dark back and white belly to hide from Predator or prey

6. Discuss with your partner why Barbary fig have spins, and are there adaptations in plants like animals?

Yes, it is structural adaptation and It has Sharp spines to prevent animals from eating them

7. How can my tree survive? Way of plant adaptation

It has sharp spines to prevent animals from eating them (Structural adaptation.)

- 8- Mention the difference between structural and behavioral adaptations in plants.

The structural adaptation is the change in body structure (Stent -roots - leaves), the behavioral adaptation is a change in the behavior (Sending smelly messages]

- 9 -Compare between: inhalation and exhalation process.

Inhalation getting oxygen in Exhalation getting carbon dioxide out

- 10- Explain the role of the diaphragm muscles in the breathing process.
 When it contracts , it increases the chest size and cause inhalation
 When it relaxes, it decrease the chest size and cause exhalation

11. Notice the following pictures of the environment then record the name that describes them.



Marine Environment



Polar Environment



Desert Environment.



Arctic fox.



Penguin



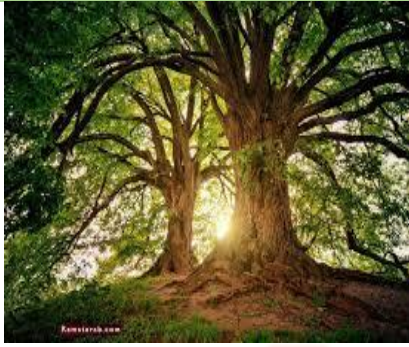
Polar bear

Which of the above living organisms can slide on the snow with bare feet?

Penguin

What are the characteristics that help it to adapt to its environment?

Dense feathers Thick layer of fat Blood vessels weaves around each other .



The root of.. Kapok tree

Live in Rainforest



The root of Acacia tree
Live in Savannah

Observe the opposite image then answer:

- Name the living organism: **Bull shark**
- lives in
fresh water and salt water environment.



Palm tree

Desert
environment
Structural
adaptation:

Thick trunk
and narrow
leaves.



Pine tree

Snow
environment
Structural
adaptation:

Triangular
shape Needle
leaves.



Barbary lig

Desert
environment
Structural
adaptation:

Sharp spines.



Water lily

Wetland
environment
Structural
adaptation:

Wide
floating
leaves.



Mangrove tree

Salt
water
environment
Structural
adaptation:

Long and
strong roots.



Behavioral adaptation	Structural adaptation	Behavioral adaptation	Structural adaptation
Live in burroww	Short ears thick fur	Pants like dog	Extra large ears
Eat all kinds of food	White fur in	Live in burrows	Tan colored fur
	winter turns into Brown fur in summer.	Eat all kind of food.	(sandy color fur)



Behavioral adaptation	Structural adaptation	Behavioral adaptation	Structural adaptation
Puffs up its body with air	each eye can face in opposite direction	eat all kinds of food	sharp teeth
Open it's mouth wide	V shaped feet	hunt during the day and at night	can live in fresh water and salt water
change color of scale	tail like hand		has dark back and white belly
	brightly color scale		

Behavioral Adaptation	change in behavior or act of living organisms to help it survive
Structural Adaptation	change in body structure of living organisms to help it survive

The organ (1) is **Esophagus...**

Its function is **move food from mouth to stomach**

The organ (2) is **stomach**

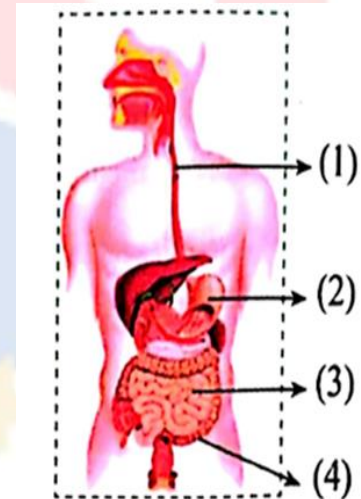
Its function is **break down food**

The organ (3) is **small intestine**

Its function is **Absorb nutrients..**

The organ (4) **large intestine**

Its function is **Absorb water**



Digestion process is: **The process of breaking down food**

(B) Look at the opposite figure that shows the structure of the human nervous system, then **answer the questions :**

1. Which part spreads all around the human body?

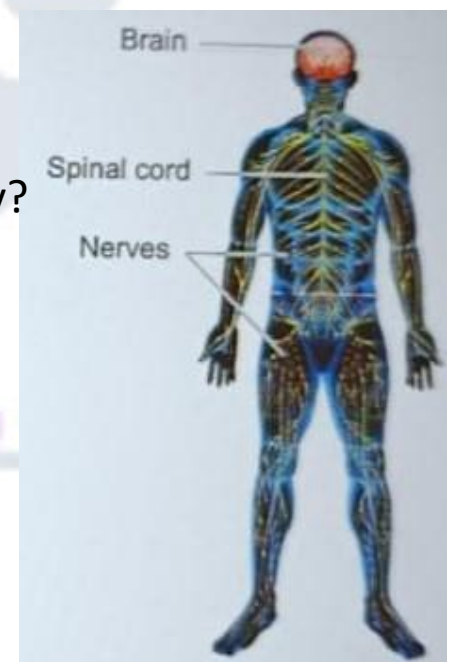
nervous

2. Which part is found inside the backbone of the human body ?

spinal cord

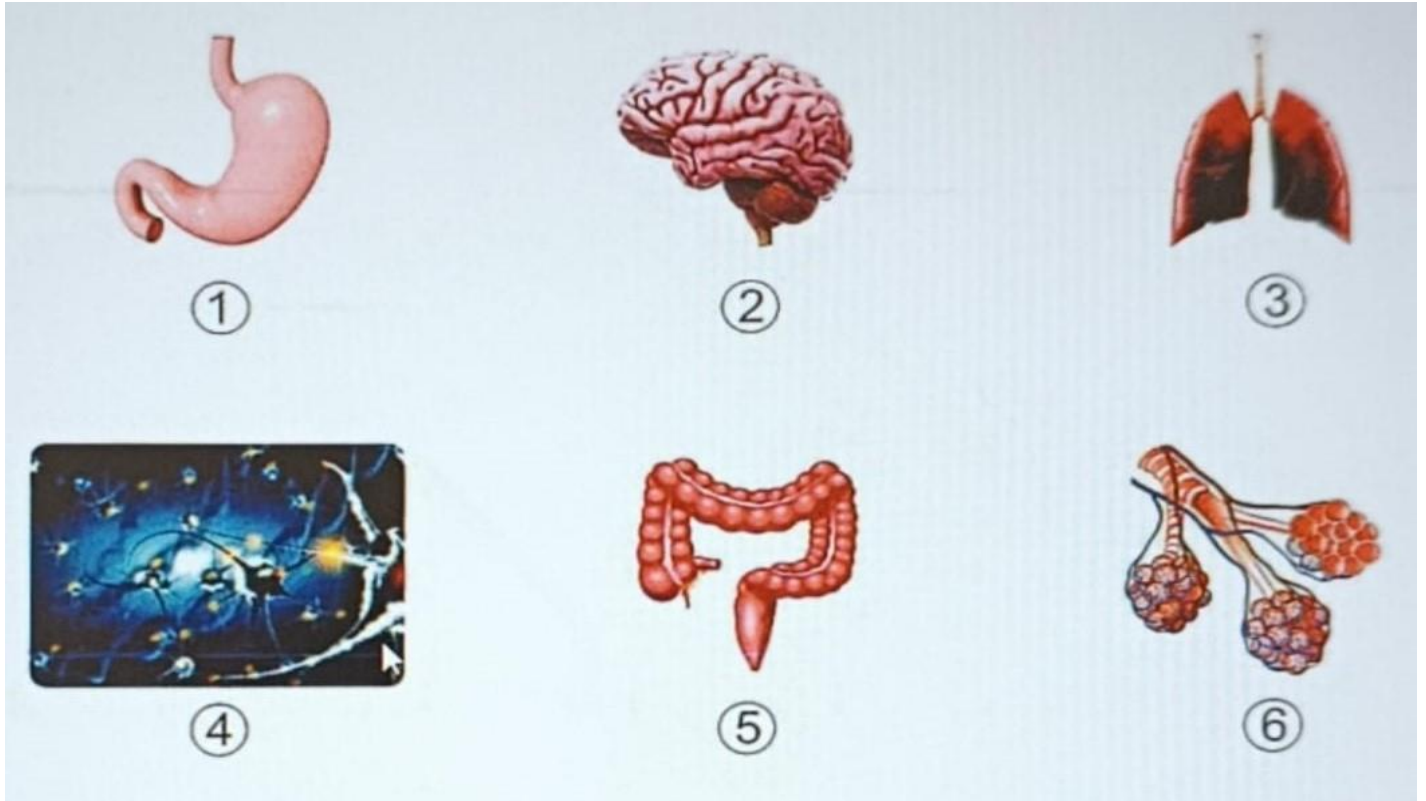
3. Which part represents the main control center In the human body ?

brain



You have some pictures of different parts of the human body. Write down the

organ number in front of the system to which it belongs in the following table :



System	Organ
1. Digestive system :	(1 – 5)
2. Respiratory system :	(3 - 6)
3. Nervous system :	(2 – 4)

مراجعات النخبة

حمل الآن

مجاناً وحصرياً

المراجعة رقم (5)

اختبار شهر اكتوبر



Q1 Give reason

- 1) The starred agama lizard always looking for shade areas in desert
To keep its body cool during hot days
- 2) The penguin's body has a thick layer of fat and dense feathers
To keep its body warm
- 3) The blood vessels in the penguin's feet weave around each other
To keep its toes from freezing as the warm blood vessels heat up the cold blood vessels
- 4) Some desert lizards have colorful scales
To hide among the colorful rocks in the desert
- 5) Fennec fox has sandy/tan colored fur, while polar bear has a white fur
So, the fennec fox can hide in the sand while the polar bear can blend in with snow
- 6) Some animals have the ability to make camouflage adaptation
To hide from their predators or prey in different environments
- 7) Fennec fox undergoes panting
To cool its body
- 8) Arctic fox has a thick fur coat
To keep its body warm in extreme cold weather
- 9) The fur of the Arctic fox is white in winter and brown in summer
To sneak up on its prey in any season
- 10) Burrow is an excellent place for arctic and fennec foxes
For Fennec fox to stay cool during sunny days while Arctic fox to stay warm at night



- 11) Fennec fox has extra-large ears, while arctic fox has short ears
To help Fennec fox to lose heat and cool its body while arctic fox to stay warm
- 12) Bull sharks have less competition for finding food on fresh water
Because other types of sharks live in salt water only
- 13) panther chameleon has V shaped feet and a long tail
To hold tightly the branches of trees
- 14) Branches of acacia tree gather on the top of its trunk
To prevent animals from reaching their leaves and eating it
- 15) Acacia tree has sharp spines around its leaves
To prevent animals from eating their leaves
- 16) wind is important to acacia tree
To send smelly messages to nearby acacia tree to start making poison if there is danger
- 17) kapok tree has hand shaped leaves
To allow wind to move gently through the leaves without tearing them
- 18) kapok trees stay firmly rooted in the soggy soil although they are very tall
Because of the large wide roots called buttress roots that hold the trunk in the soggy soil
- 19) pine tree has a triangular shape and short branches
To allow the snow to slide easily over it so the branches do not break
- 20) water lilies have wide floating leaves
To absorb a large amount of sunlight
- 21) mangrove trees have long and strong roots
To resist the water waves
- 22) palm trees have thick roots and small leaves
To resist the strong winds



- 23) Barbary fig has sharp spines
To prevent animals from eating its fruits and leaves
- 24) the human body is made up of different systems
To perform different functions
- 25) the importance of juices of liver and pancreas
to help in breaking down food into nutrients
- 26) Anus is an important organ in the digestive system
Because solid wastes can leave the body through it
- 27) the inhaled air differs from the exhaled air
Because the inhaled air is rich in oxygen gas while the exhaled air is rich in carbon dioxide gas
- 28) diaphragm plays an important role in respiration process
Because it contracts and moves downward during inhalation to increase the size of chest while it relaxes and moves upward during exhalation to decrease the size of the chest
- 29) Gills are unique structural adaptation in fish
Because they enable fish to breathe oxygen underwater
- 30) cars and factories exhaust cause breathing problems
Because they produce smog which causes damage to the lungs, asthma, and heart diseases
- 31) sometimes people in big cities are forced to change their lifestyles
To decrease air pollution
- 32) Skin of fish is different from that of frog, although both of them live in water
Because frog's skin can absorb oxygen gas from water while fish cannot
- 33) Dry season is very harmful for amphibians
Because their skin must be wet all the time to extract oxygen gas from water



- 34) Pollution of air and water can affect the survival of amphibians
Because they breathe oxygen gas from water and air
- 35) Scientists must study how amphibians interact with their environments
To help them survive
- 36) The Egyptian mongoose make sounds
To communicate with other mongoose to move from one place to another or when searching for food
- 37) Owls can hunt during the night
Because they have extraordinary senses of hearing and sight to hunt at night
- 38) Dogs are used in guarding
Because they have sharp senses of hearing and smell
- 39) Dolphins can hear all kinds of sounds
Because they have sharp senses of hearing
- 40) Animals that live in hot regions become active at night
To hunt in cool weather
- 41) Owls have bowl shaped faces
To detect the location of their preys through picking up sounds around them
- 42) Bats can catch insects in the dark
Because they depend on echolocation to find insects at night
- 43) Owl is a nocturnal animal
Because it becomes active at night
- 44) The Egyptian Jerboa can jump for long distances
Because it has long hind legs to jump for long distances
- 45) The presence of hair on the Egyptian Jerboa's feet and toes
To help it catch the sand when it jumps



- 46) The Egyptian Jerboa's ears play a very important role in its survival
Because it has large and sensitive ears that detect even a quiet snake
- 47) Humans can recognize the sounds of different musical instruments
Because ears receive the different sounds and transmit them to the brain to be processed and determine the type of musical instrument
- 48) The brain has an important function in the nervous system
Because it is the main control center of the body
- 49) The songs of humpback whales have high pitched sounds during winter months
Because high pitched sounds travel better through cold water
- 50) Humpback whales sing different songs
To communicate with each other in different seasons
- 51) the nurse ants send smelly messages to scout ants
To alert the scout ants that the food is low
- 52) the soldier ants use smells in their communication
To communicate with the other ants in case of danger
- 53) The echo that is picked up by the special cane of blind people is turned into vibrations
To tell the blind person where objects are around him
- 54) The blind people cannot hear the sound that emits from their special canes
Because their special canes emit a high-pitched sound that human's ears cannot hear



Q2 What happens if

- 1) The warm blood vessels and cold blood vessels in the penguins' feet do not weave around each other
Penguins' toes will freeze
- 2) The polar bear has thin fur instead of thick fur
It cannot adapt with the cold weather in the polar region, and it will die
- 3) The body of fennec fox is covered with black fur
It cannot hide in the desert from prey or predators
- 4) some types of lizards are not able to make camouflage adaptation
They cannot hide from prey or predators
- 5) Arctic foxes have a brown coat during winter, but it turns white during summer
It cannot hide from its prey in winter or summer
- 6) Fennec fox has short ears
It cannot cool its body
- 7) Sense of hearing becomes weak in foxes
They cannot hunt their prey
- 8) Arctic fox has only a white coat during all seasons of the year
It cannot sneak up on its prey in the summer
- 9) Both eyes of panther chameleon move in one direction only
It cannot hide from its prey and predators
- 10) Panther chameleon is exposed to danger
It puffs up its body with air, opens its mouth wide and changes the color of its scales



11) the length of acacia taproot does not exceed three meters downward

It cannot search for water in the deep soil

12) the acacia leaves are not guarded by sharp spines

Animals can eat these leaves

13) there are no buttress roots in the kapok tree

Kapok tree cannot stay firmly in the soggy soil

14) the pine tree has an umbrella shape not a triangular shape

The snow cannot slide easily over its branches so branches can break down

15) some plants of rainforest habitat became very short

The sunlight cannot reach these plants easily

16) water lily has narrow leaves instead of wide leaves

It cannot absorb a large amount of sunlight

17) palm tree has thin roots and large leaves

It cannot resist the strong winds

18) the small intestine is removed from the human body

The digestive system cannot perform its function properly

19) the nutrients absorbed by the walls of small intestine enter the tiny blood vessels

The blood carries these nutrients to all body parts

20) the diaphragm moves downward during inhalation

The size of the chest increases and the air rich in oxygen gas enters the lungs

21) the diaphragm moves upward during exhalation

The size of the chest decreases and the air rich in carbon dioxide gas comes out of the lung



- 22) human activities and bad habits increase
Air, water, and soil pollution will increase
- 23) the exhaust from cars and factories increases in big cities
Smog increases causing breathing problems such as damage of lungs, asthma, and heart diseases
- 24) water pollution increases (for human and fish)
Human cannot find clean water to drink, and fish cannot find clean water to breathe
- 25) pollution level increases in the natural habitat of amphibians
The number of amphibians will decrease
- 26) the ecosystem of amphibians contains clean air and water
Amphibians will survive and their number increase
- 27) Amphibians do not have lungs and breathe only through skin
They can live only underwater
- 28) the number of predators of amphibians increases
The number of amphibians will decrease
- 29) salamanders have lungs only to respire
Salamanders can live on land only
- 30) skin of frogs becomes dry
They cannot survive
- 31) the sound waves produced by a dolphin hit an object under water
It bounces back to the dolphin in the form of echo so the dolphin can detect the location of the object
- 32) Bats lose the ability to hear by using echolocation property
They cannot hunt at night
- 33) Owls cannot turn their heads in all directions
They cannot search for preys everywhere
- 34) Your hand touches the spines of a barbary fig plant
Your hand will move quickly away



- 35) The Egyptian Jerboa hears a snake moves towards it
It hops in zigzag path so it can escape quickly
- 36) The spinal cord became absent from the components of the nervous system
Messages cannot be transmitted between brain and body parts
- 37) sensory receptors related to the eyes stopped sending messages to the brain
Brain cannot process what the eyes see
- 38) The hearing sense of humpback whales becomes weak
They cannot communicate by songs using their hearing sense
- 39) The smell sense of ants becomes weak
They cannot communicate with each other by smelling messages
- 40) the amount of food in the ant's colony decreases
The nurse ants send a smelly message to the scout ants to alert the ants where to find food
- 41) there is a danger near an ant's colony
The soldier ants send smelly messages to alert the other ants that there is danger
- 42) High-pitched sound that is produced by the blind person's cane hits an object
It bounces back to the cane in the form of echo which is turned into vibrations
- 43) bats cannot use echolocation property
They cannot communicate with each other or locating the objects by the sense of hearing
- 44) There is a wall in front of a blind person who uses his special cane
The cane will make vibrations that tell the blind person that there is a wall in front of him



كيفية طباعة صفحات معينة من ملف معين مثلا ازاي نطبع الصفحات من صفحة 4 الى صفحة 9

